

2015-1565

**United States Court of Appeals
for the Federal Circuit**

SCRIPTPRO, LLC and SCRIPTPRO USA, INC.,

Plaintiffs-Appellants,

v.

INNOVATION ASSOCIATES, INC.,

Defendant-Appellee.

*Appeal from the United States District Court for the District of Kansas
in Case No. 2:06-cv-02468-CM United States District Judge Carlos Murguia*

BRIEF FOR PLAINTIFFS-APPELLANTS

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CERTIFICATE OF INTEREST

Counsel for the Petitioner certifies the following:

1. The full names of every party represented by the undersigned counsel in this case are: ScriptPro LLC and ScriptPro USA Inc.
2. ScriptPro LLC and ScriptPro USA Inc. are the names of the real parties in interest.
3. ScriptPro LLC and ScriptPro USA Inc. have no parent companies, and no publicly held corporation owns 10% or more of the stock of ScriptPro LLC or ScriptPro USA Inc.
4. The names of the law firms and the partners and associates that have appeared for ScriptPro LLC and ScriptPro USA Inc. in the district court or are expected to appear for the same in this Court are: R. Scott Beeler, R. Cameron Garrison, Travis W. McCallon, A. Justin Poplin, and Jennifer M. Hannah, all of Lathrop & Gage LLP.

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STATEMENT OF RELATED CASES

This case was previously before this Court on appeal after a prior summary judgment ruling by the district court. That appeal was docketed as Appeal No. 2013-1561, and titled ScriptPro, LLC and ScriptPro USA, Inc. v. Innovation Associates, Inc. That appeal was before the Honorable Circuit Judges Taranto, Bryson, and Hughes. The Court decided the case on August 6, 2014, and the opinion can be found at *ScriptPro, LLC v. Innovation Associates, Inc.*, 762 F.3d 1355 (Fed. Cir. 2014).

This case has not been before any other appellate court, and no other cases will be affected by the Court's decision in the pending appeal.

JURISDICTIONAL STATEMENT

The district court possessed subject matter jurisdiction over ScriptPro LLC's and ScriptPro USA Inc.'s (collectively "ScriptPro") claims pursuant to 28 U.S.C. § 1338(a), as ScriptPro asserted claims of patent infringement pursuant to 35 U.S.C. § 271. Jurisdiction over ScriptPro's appeal is proper pursuant to 28 U.S.C. § 1295(a)(1). On March 30, 2015, the district court granted summary judgment of invalidity under 35 U.S.C. § 112, ¶ 1 with respect to all asserted claims (1, 2, 4, and 8) of ScriptPro's U.S. Patent No. 6,910,601. This order effectively resolved or mooted all other pending causes of action in this matter. ScriptPro timely filed its notice of appeal on April 16, 2015. *See* Fed. R. App. P. 4(a)(2); (*see* A061).

STATEMENT OF THE ISSUE

The specification of U.S. Patent No. 6,910,601 discloses a unit that, in relevant part, collates prescription containers. The specification does not mandate collation based upon a specific type of identifying information like a patient's name. In fact, it expressly envisions the use of different types of identifying information. The asserted claims all expressly recite "a collating unit," but do not mandate collation based upon any specific type of identifying information. Did the district court err in invalidating the asserted claims on the basis that they do not require collation "by patient name"?

STATEMENT OF THE CASE

ScriptPro initiated this action in the United States District Court for the District of Kansas on October 26, 2006, against Innovation Associates, Inc. (“Innovation”), asserting infringement of claims 1, 2, 4, and 8 of U.S. Patent No. 6,910,601 (the “‘601 Patent”). (*See* A018, A2607).

Ten months after ScriptPro initiated the action, Innovation requested *inter partes* reexamination of claims 1-3, 7-9, and 13-16 of the ‘601 Patent, and the PTO granted the request on November 14, 2007. (A1250-51). Innovation subsequently sought and obtained a stay of the district court action pending reexamination. (*See* A2). Over three years later, the PTO ultimately *confirmed* claims 8, 9, and 13-16 without amendment, *confirmed* claims 1, 2, and 4 as amended/rewritten¹ by ScriptPro during reexamination, and *confirmed* claim 7 as dependent on amended claim 1. (A83, A2604).

On December 30, 2011, ScriptPro and Innovation filed cross-motions for summary judgment. (*See* A42-43). Innovation sought summary judgment that the asserted claims of the ‘601 Patent are invalid pursuant to 35 U.S.C. § 112, ¶ 1 for lack of written description support. (*See* A1985). Specifically, Innovation argued that the asserted claims are broader than the disclosure in the specification because the asserted claims lack limitations requiring the claimed collating units to utilize

¹ ScriptPro rewrote claim 4 in independent form, but did not substantively amend the claim. (*See* A79, A83).

sensors. (A1985). The district court granted summary judgment in favor of Innovation on this issue, and invalidated all of the asserted claims under 35 U.S.C. § 112, ¶ 1. (A5145-51).

ScriptPro timely appealed this ruling after Innovation later voluntarily dismissed its tortious interference claims on the eve of trial. (A57). On appeal this Court reversed, holding that “[t]here is no sufficiently clear language in the specification that limits the invention to a collating unit with the (slot-checking) sensors” and that “a trier of fact could find that a skilled artisan would understand the specification to disclose a system that relies on computer memory, without sensors, to fulfill the central purpose of keeping track of slot use by particular customers and slot availability, with sensors optionally providing confirmation only.” *ScriptPro, LLC v. Innovation Associates, Inc.*, 762 F.3d 1355, 1361 (Fed. Cir. 2014) (*ScriptPro I*).

After remand to the district court, Innovation filed another motion for summary judgment raising a never-before-presented written description argument. Although its argument was again based upon the general premise that the claims are broader than the disclosure in the specification, this time it argued that the claims lacked any component for keeping track of what slots are open and what slots are being used for a particular patient. (A5185, 5192). Later, on reply, it

added an additional argument that the claims do not require container storage “by patient name.” (A5414-15).

On March 30, 2015, the district court granted summary judgment in favor of Innovation, and invalidated all of the asserted claims of the ‘601 Patent for lack of written description support on the basis that they do not require container storage “by patient name.” (A8-10).

ScriptPro timely filed its notice of appeal on April 16, 2015. (*See* A061). Only the district court’s March 30, 2015 summary judgment order is at issue on this appeal.

STATEMENT OF THE FACTS

A. The ‘601 Patent is directed to “a collating unit” for automatically storing prescription containers.

ScriptPro develops and provides robotics-based pharmacy management and workflow systems. ScriptPro owns the ‘601 Patent,² which is titled “Collating Unit for Use with a Control Center Cooperating with an Automatic Prescription or Pharmaceutical Dispensing System.” As this title implies, the patent is directed to “a collating unit operable to automatically store prescription containers dispensed from an automatic dispensing system . . .” (A72, at 1:19-21). ScriptPro sells and

² The patent issued on June 28, 2005 out of a non-provisional application filed July 8, 2003. (A62). The inventors filed a provisional application on July 8, 2002. (A62).

provides support for collating units that embody the invention disclosed in the ‘601 Patent. (*See A85, ¶7*).

The specification identifies a number of problems with prior art automatic dispensing systems, including several that are particularly pertinent here. Specifically, prior art automated systems were “limited to storing only one prescription container per a slot or compartment,” and further stored containers based on a number associated with a container rather than an identifier associated with the relevant patient or customer. (A73, at 3:4-10). These shortcomings resulted in significant inconveniences for pharmacy operators. Under prior art systems, operators “retrieving stored containers for a patient must retrieve containers from several different slots” and painstakingly ensure proper matches with a patient in order to properly retrieve all of a patient’s prescriptions from various holding areas. (A73, at 3:14-17, 3:26-33).

A significant aspect of the invention of the ‘601 Patent that solves these problems is *collation*.³ As the specification explains, the invention solves the problems presented by the prior art by “provid[ing] a *collating unit* that may be used with an existing static control center to automatically store prescription containers.” (A73, at 4:14-20 (emphasis added)). Indeed, because the invention is operable to “collate and store multiple containers for a patient within the same

³ The invention embodies additional advances, as well.

area,” it necessarily stores more than one prescription container in a holding area and associates containers with respective patients. (*See* A74, at 6:32-38). All of this allows for easier and more accurate retrieval of a patient’s prescription containers.

The specification explains that the invention collates containers based upon “identifying information” associated with the containers. (A74, at 5:40-43, 6:11-14; A75, at 7:26-32; A77, at 11:46-48, 12:54-57). Although the specification identifies “patient name” as one preferred type of such identifying information, it envisions other identifiers, as well. Thus, for example, it explains that “[t]he collating unit is operable to automatically store filled prescription containers . . . based on an organization scheme that accounts for identifying information of the container, *such as* a patient name for whom the container is intended *or* a prescription number of the container.” (A75, at 7:26-32 (emphases added); *see e.g.* A77, at 12:45-13:6).

As described in the context of the preferred embodiments, a collating sequence begins when “a script is entered into the control system 90 of the ADS 14,” or automatic dispensing system, including “identifying information for the script, such as a patient’s name.” (A77, at 11:44-48). The control system of the ADS next “sends the script information to the control system 28 of the collating unit 10.” (A77, at 11:61-64). “When the collating unit 10 is initially empty, the

control system 28 instructs the first container exiting the ADS 14 be stored in the first available holding area 22.” (A77, at 12:17-19). Then, “as containers are stored in the collating unit 10, the control system 28 tracks in which holding area 22 the container is stored and the patient for whom the container is intended.” (A78, at 13:51-54; A77, at 12:45-47). And “[u]pon retrieval or removal of the container from the holding area 22, the control system 28 closes the script to indicate the container for the patient has been retrieved.” (A78, at 14:27-29). As a result of the control system’s tracking, “[a]n operator of the collating unit 10 may at any time determine which containers are currently stored in the collating unit 10 and the location of the containers in the collating unit 10.” (A77, at 12:47-50).

All of the claims appearing in the ’601 Patent’s original application issued without rejection or amendment. (*See* A3814). Given the centrality of collation—and of a control system in directing such collation—it is no surprise that all of the claims of the ’601 Patent, in their original form and as issued, expressly recite “a collating unit” that includes, among other things, a “control system.” Asserted claim 8 is representative:

8. A collating unit for automatically storing prescription containers dispensed by an automatic dispensing system, the collating unit comprising:

an infeed conveyor for transporting the containers from the automatic dispensing system to the collating unit;

a collating unit conveyor positioned generally adjacent to the infeed conveyor;

a frame substantially surrounding and covering the infeed conveyor and the collating unit conveyor;

a plurality of holding areas formed within the frame for holding the containers;

a plurality of guide arms mounted between the infeed conveyor and the collating unit conveyor and operable to maneuver the containers from the infeed conveyor into the plurality of holding areas; and

a control system for controlling operation of the infeed conveyor, the collating unit conveyor, and the plurality of guide arms.

(A79, at 16:34-54).

B. ScriptPro’s prior arguments on the first appeal accurately highlighted the implications of the invention’s collating function.

In its December 2011 summary judgment motion, Innovation argued that the asserted claims of the ‘601 Patent were invalid for lack of written description support because they do not recite sensors. According to Innovation’s argument at that time, the specification described sensors as the only feature capable of determining the location of containers and the availability of open storage positions within the collating unit, thereby limiting the invention to a collating unit that *must* include sensors. (*See* A1985-91). The district court granted Innovation’s motion for summary judgment in this regard, and ScriptPro appealed.

On appeal, ScriptPro explained that the ‘601 Patent’s specification expressly describes sensors as an optional “security feature” used only to “confirm” the

presence of a container that was already known. (A5253-55). In support of this argument, ScriptPro noted that one of the primary goals of the invention is to “associate a stored container with a patient” and to “collate and store multiple containers for a patient within the same area.” (A5253 (citing A74, at 6:35-38)). In order for the unit to execute this collating function, ScriptPro explained, the unit must necessarily know the location of a specific patient’s containers at all times. (A5253). The sensors are merely binary in their functionality, however, and can only “determine the presence of a container within the collating unit”—without regard to any “identifying information” for a container. (A5253 (citing A73, at 4:61-62; A77, at 11:66-67). Thus, as ScriptPro further explained, some other feature of the invention must track the “identifying information” for the containers, and the specification expressly explains that the unit’s “control system” does just that. (*See* A5253-55). As a result, the greater context of the invention—and specifically the invention’s collating function—makes clear that sensors are merely optional, with functionality that is redundant to that provided by the control system.

In contrast, Innovation’s conception of the sensors as “the one and only” feature used to determine the location of containers within the collating unit was wholly disconnected from the invention’s collating function and, as such, was out of sync with the specification’s explanation of the operation of the entire

invention. Indeed, Innovation’s belief that the invention was driven by sensors effectively rendered the invention a mere storage device incapable of associating containers with specific patients, and thus unable to collate.

This Court rejected Innovation’s (and the district court’s) position in favor of ScriptPro’s. Specifically, after noting that the specification describes sensors as a “security feature” used to “confirm” the presence of containers within the unit, the Court explained that this description of the sensors “aligns with the disclosure’s explanation of functions sought to be achieved by the invention.” *ScriptPro I*, 762 F.3d at 1360. More specifically, the Court held that “[a] skilled artisan may well be able reasonably to read the specification as teaching a specific means of achieving a central stated purpose of the asserted invention without the slot sensors”—the central stated purpose of the invention being “to keep track of what slots are open and what slots are being used for a particular customer.” *Id.* at 1359-61. Indeed, the Court explained that the specification’s description of “the ‘control system’ as initially selecting a slot for storage of a particular prescription container based on the patient’s identity . . . might well be understood to suggest a computer memory in the control system that keeps track of slot-patient assignments.” *Id.* at 1361.

Because the Court found that “a trier of fact could find that a skilled artisan would understand the specification to disclose a system that relies on the computer

memory, without sensors, to fulfill the central purpose of keeping track of slot use by particular customers and slot availability,” it reversed the district court’s order of summary judgment. *Id.* at 1361-62.

C. In reaction to this Court’s prior reversal, Innovation concocted a moving target argument that was again disconnected from the collating function of the invention.

Although not necessary to its decision—nor raised or briefed by either of the parties—this Court in reversing the district court’s summary judgment order also commented on the language of the claims. Namely, after noting that a central purpose of the invention highlighted by ScriptPro was “to keep track of what slots are open and what slots are being used for a particular customer,” it added that “[i]t is not immediately apparent how the claim language, properly construed, requires any means of achieving that purpose.” *ScriptPro I*, 762 F.3d at 1359. While it had held that a trier of fact could find that the specification discloses a system that relies on computer memory, without sensors, to keep track of slot use by particular customers and slot availability, the Court noted that “[i]t is a separate question whether the claims *claim* such reliance,” which was an issue the Court recognized was not before it. *Id.* at 1361.

Although Innovation had never before raised any argument related to this comment, it quickly seized upon it after remand, seeking leave with the district court to file yet another motion for summary judgment—its third in this case—for

lack of written description support. And while it promised a narrowly tailored motion, the argument it ultimately made continually shifted focus, and in all of its forms again ignored the critical collating function disclosed in the specification and recited in the claims.

Innovation’s December 2014 motion for summary judgment on this issue posited that the asserted claims lack written description support because they allegedly “lack any component for keeping track of what slots are open and what slots are being used for a particular patient.” (A5185; *see* A5189, at ¶14). By its own terms, this argument was an attack on the sufficiency of the claims’ recitation of the structural “components” of the invention itself, not an attack on the sufficiency of the claims’ recitation of the purposes of the invention.

For example, Innovation in its motion anticipated that ScriptPro would respond to Innovation’s structural-component argument by referring to its expert, who, as Innovation expressly noted, “had opined that a skilled artisan would understand the specification to disclose a system that achieves the invention’s stated purpose via computer memory.” (A5192). Innovation attempted to preemptively address this counterargument not by arguing that the claims lack limitations reciting any of the invention’s stated purposes, but by arguing that “the asserted claims do not require computer memory.” (A5192). To support this point, Innovation noted that this Court’s prior dicta on the issue concerned not

whether the claims recite any of the stated purposes of the invention, but whether the claims claim a reliance “on computer memory” in order to fulfill any such purposes. (A5192 (quoting *ScriptPro I*, 762 F.3d at 1361). And to emphasize this structural-component focus even further, Innovation listed all of the structural components recited in the asserted claims (“a frame, holding areas, guide arms, conveyors,” etc.), and concluded that “[n]o component achieves patient-specific storage.” (A5192; *see also* A5189, at ¶ 14).

In its opposition, ScriptPro did, in fact, explain that the “control system” recited in each of the asserted claims—and the memory inherent to such system—is clearly the structural component that is capable of “keeping track of what slots are open and what slots are being used for a particular patient,” thereby achieving patient-specific storage. (*See* A5360-63).

On reply, however, Innovation changed its position, arguing that the very structural component that it had originally challenged ScriptPro to identify was now “irrelevant.” (A5414 (“[T]o the extent that ScriptPro relies on a component recited in the claims (e.g., ‘control system’) for achieving storage according to the central purpose of the invention, that component is irrelevant . . .”)). Indeed, rather than focus on any aspect of the claims’ recitation of structural components, it argued for the first time that the asserted claims “do not require storage according to the central purpose of the invention,” which, according to Innovation,

is “storing prescription containers based on the availability of an open storage position and a patient name.” (A5414-15). In other words, what began as a challenge to the claims’ recitation of structural components morphed on reply into a challenge to the claims’ recitation of the alleged “central purpose of the invention.”

D. The district court adopted Innovation’s reply argument without consideration of the relevant specification passages or claim terms.

The district court adopted Innovation’s reply argument that the claims fail to require storage according to an alleged central purpose of the invention, and it therefore granted summary judgment that the asserted claims are invalid for lack of written description support. (A10). According to the district court, “the specification indicates that the prescription containers are stored based on patient name and slot availability, but the claims state only that the invention stores prescription containers.”⁴ (A7; *see also* A8 (stating that “the claims do not limit the ways in which the prescription containers are stored”)).

The court quickly dismissed the initial issue raised by Innovation regarding the nature and role of the invention’s structural components, stating merely that the issue “is a point of contention between the parties.” (A10). “Regardless of whether the claims refer to a control system,” the court reasoned, “they do not

⁴ The district court also relied on its belief that “the appellate court signaled that the claims might lack written support for another reason.” (A6).

specify that the control system directs storage of the containers based on patient name.” (A10). “Without including a limitation to address the storage by patient name,” the court concluded, “the claims are simply too broad to be valid.” (A9).

The district court in reaching this conclusion did not address:

- the invention’s collating function and what collation entails;
- the specification passages presenting “patient name” as merely one type of preferred “identifying information”;
- the legal standards for determining how and when the specification limits the scope of an invention; or
- the asserted claims’ express recitation of “a collating unit,” and how such a recitation affects the scope of the claims.

These critical omissions are fatal to the district court’s reasoning and conclusion.

SUMMARY OF THE ARGUMENT

In once again invalidating the asserted claims for lack of written description support on summary judgment, the district court interpreted the specification too narrowly and the asserted claims too broadly. The specification discloses a unit that collates prescription containers, but it does not mandate collation based upon any specific type of identifier like “patient name.” Instead, the specification explains that collation merely requires “identifying information” for prescription containers. And it uses open-ended “such as” language when referring to exemplary types of identifying information, like a patient’s name—making clear

that the inventors did not intend to limit “identifying information” to “patient name” only.

The stated purpose of “keeping track of slot use by particular customers and slot availability” does not require storage “by patient name,” either, as the district court believed. Rather, “keeping track of slot use by particular customers and slot availability” is inherent to collation, regardless of the specific type of identifying information used. Indeed, the invention still operates to keep track of slot use “by particular customers” (and otherwise fulfill all of its collation-related purposes) if it collates a patient’s containers based on their phone number or address, rather than their name.

Given that the specification does not limit the invention to one that collates containers “by patient name” only, the asserted claims need not include a limitation to that end in order to satisfy the written description requirement. The district court missed this altogether.

The district court was also wrong to otherwise conclude that the asserted claims “do not limit the ways in which the prescription containers are stored.” Because they all expressly recite “a collating unit,” the asserted claims are directed to subject matter that is more limited than a mere storage unit. The district court missed this critical limitation, as well. Because the claims and the specification

both require collation, there is no discrepancy in scope as between them, and therefore no written description problem.

Finally, the history of the ‘601 Patent highlights that the written description requirement is—once again—a thin reed upon which to invalidate the asserted claims, particularly on summary judgment. The original, as-filed versions of the asserted claims of the ‘601 Patent did not recite any limitations requiring collation “by patient name.” Rather, the original claims—like the asserted claims themselves—expressly recited “a collating unit.” Because these original claims are part of the specification, they further indicate that the inventors recognized and were claiming a unit that collates prescription containers without any additional limitation requiring collation “by patient name.”

ARGUMENT

A. Standard of Review

“The test under the written description requirement is whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.” *Hynix Semiconductor Inc. v. Rambus Inc.*, 645 F.3d 1336, 1351 (Fed. Cir. 2011) (internal quotation omitted). “[W]hether a claim is supported by an adequate written description is a factual inquiry,” and “the accused [infringer] must show that the claims lack a written description by clear and convincing evidence.”

Id. Thus, “[t]o invalidate a patent on summary judgment, the moving party must submit such clear and convincing evidence of invalidity that no reasonable trier of fact could find otherwise.” *Ateliers de la Haute-Garonne v. Broetje Automation USA Inc.*, 717 F.3d 1351, 1356 (Fed. Cir. 2013).

“A district court's grant of summary judgment on written description is reviewed *de novo*.⁵ *Crown Packaging Tech., Inc. v. Ball Metal Beverage Container Corp.*, 635 F.3d 1373, 1380 (Fed. Cir. 2011). In other words, this Court “review[s] without deference whether disputed material facts exist, and review[s] independently whether the prevailing party is entitled to judgment as a matter of law.” *Novartis Corp. v. Ben Venue Laboratories, Inc.*, 271 F.3d 1043, 1046 (Fed. Cir. 2001); *see Lochner Technologies, LLC v. Vizio, Inc.*, No. 2013-1551, 567 Fed. Appx. 931, 937 (Fed. Cir. 2014) (“We review the district court's decision granting summary judgment of invalidity for lack of written description without deference. Whether a claim recites the subject matter which the applicant ‘regards as his invention’ is a question of law that we review *de novo*.” (citation omitted)). Summary judgment is appropriate only where “the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a

⁵ “Under the law of the [T]enth [C]ircuit, the grant or denial of a summary judgment motion is reviewed *de novo*.” *Broadcast Innovation, L.L.C. v. Charter Communications, Inc.*, 420 F.3d 1364, 1366 (Fed. Cir. 2005) (citation omitted)); *see Brecek & Young Advisors, Inc. v. Lloyds of London Syndicate 2003*, 715 F.3d 1231, 1237 (10th Cir. 2013) (same).

matter of law.” Fed. R. Civ. P. 56(a). The Court should view the facts and draw any reasonable inferences from the facts in the light most favorable to the non-movant, in this case ScriptPro. *Brecek*, 715 F.3d at 1237.

B. Under a proper reading of the specification and asserted claims, the asserted claims satisfy the written description requirement.

The district court granted summary judgment because it incorrectly believed that “the specification indicates that the prescription containers are stored based on patient name and slot availability, but the claims state only that the invention stores prescription containers.” (A7). In so reasoning, the court interpreted the specification too narrowly and the claims too broadly.

1. The district court improperly limited the invention disclosed in the specification by confusing collation itself with a preferred form of collation.

In its order, the district court observed that “one of [the invention’s] central purposes is to collate and store prescriptions by patient” and that ScriptPro in the prior appeal emphasized that a central purpose of the ‘601 patent is “to ‘keep track of slot use by particular customers and slot availability.’” (A9 (quoting *ScriptPro I*, 762 F.3d at 1361)). These observations are fair as far as they go, but the problem with the district court’s analysis is that it assumed, based upon these observations alone, that the invention must be limited to prescription storage “by patient name.” (A9). Neither the specification nor ScriptPro’s prior arguments limit the invention in this manner, however. Rather, the thrust of both the specification and

ScriptPro's prior arguments is merely that the invention is operable to *collate* prescription containers—without regard to whether collation is “by patient name” or some other piece of identifying information. Collation “by patient name” is merely a preferred embodiment.

As an initial matter, when describing the field of the invention the specification focuses on collation generally, not collation “by patient name”—“the invention relates to a collating unit operable to automatically store prescription containers dispensed from an automatic dispensing system for subsequent retrieval by an operator.” (A72, at 1:19-22). And the specification indicates that the invention solves certain problems presented by the prior art by “provid[ing] a *collating unit* that may be used with an existing static control center to automatically store prescription containers.” (A73, at 4:14-20 (emphasis added)). The remainder of the specification repeatedly and uniformly refers to the invention as a “collating unit.” (See e.g. A73, at 4:18-20; A74, at 6:21-22, 6:54-57; A75, at 7:24-32; A77, at 11:65-67, 12:18-20, 12:45-47, 12:63-65; A78, at 13:50-53).

Moreover, the specification does not present storage or collation “by patient name” as the singular or even primary focus of the invention, but merely as one purpose among many that a collating unit is capable of achieving. For example, in taking account of the shortcomings of the prior art, the specification identifies several needs addressed by a collating unit that are distinct from storage “by

patient name,” including “a need for a unit operable to store more than one container in a holding area” and “a need for a unit operable to collate multiple containers for a patient in one holding area.” (A73, at 3:65-4:1). Only after ticking through these collation-related purposes does the specification add that there is a “further” need for “a unit operable to store a container for a patient based on the patient’s name.” (A73, at 4:1-2).

The specification goes on to explain that while the act of collating necessarily requires an identifier for the containers being collated, such an identifier is not limited to a patient’s name: “[t]he collating unit is operable to automatically store filled prescription containers . . . based on an organization scheme that accounts for identifying information of the container, such as a patient name for whom the container is intended or a prescription number of the container.” (A75, 7:26-32; *see also* A77, at 11:46-50). Although the specification could have simply stated that the invention’s organization scheme is based upon “patient name[s],” it instead states that the scheme is based upon “identifying information”—a category that is broader than simply “patient name.” The fact that the specification uses the open-ended phrase “such as” to qualify the types of information recited further indicates that the identifier “patient name” is merely exemplary, and not mandatory. And the fact that the specification specifically recites another identifier (“prescription number”) confirms the point.

The broader reference to “identifying information” and the open-ended “such as” phrase appear in multiple other areas of the specification, as well. For example, in summarizing the initial operational steps of the invention, the specification states: “[i]n operation, a prescription for a patient is entered into the control system of the ADS along with identifying information for the prescription, such as the patient’s name.” (A74, at 5:40-42). The specification describes the retrieval of containers in the same manner: “[w]hen an operator of the collating unit desires to retrieve the container from the holding area, the operator may input the identifying information for the prescription, such as the patient’s name, into the control system via the input device.” (A74, at 6:11-14; *see also* A77, at 12:53-57).

No reasonable person would read these passages and conclude that the specification envisions a collating unit that collates containers *exclusively* “by patient name.” Indeed, given the specification’s repeated references to “identifying information” and its open-ended qualifying language, it is simply not reasonable to conclude that the entirety of the specification “unambiguously limit[s]” the scope of the invention to the narrow embodiment of collation by patient name only, which is the showing this Court has required in similar written description cases. *Cordis Corp. v. Medtronic AVE, Inc.*, 339 F.3d 1352, 1365 (Fed. Cir. 2003) (quoting *Johnson Worldwide Associates, Inc. v. Zebco Corp.*, 175 F.3d 985, 993 (Fed. Cir. 1999)).

It is apparent from the district court’s analysis that it failed to appreciate this necessary showing. The court’s substantive analysis includes only *a single sentence* that relates to or relies upon a passage from the specification, and the court did not address any of the specification’s references to “identifying information” or the open-ended “such as” passages discussed above. (*See A8*). As such, there can be no question that the court failed to take account of “the entirety of the specification” on its way to limiting the permissible scope of the invention, nor could the court have made any conclusion about the “unambiguity” of the specification. *Cordis Corp.*, 339 F.3d at 1365. At bare minimum, a reasonable fact finder could conclude that the specification does not limit the invention to one that must collate “by patient name.” It was therefore error for the district court to summarily conclude that the invention is somehow limited to achieving the singular purpose of storing prescription containers “by patient name.”

Moreover, nothing in ScriptPro’s prior argument on appeal was contrary to the specification or dependent upon the invention being limited to storage “by patient name,” as the district court now seems to suggest. Rather, ScriptPro’s point during the prior appeal was simply that in order to collate prescription containers, the claimed invention must possess some *identifying information* for each container within the system. (A5253-55; A5331-32; *see A75*, at 7:29-32). Indeed, this basic point about the nature of the invention’s collating function

supported ScriptPro’s greater argument about sensors precisely because sensors are incapable of providing or tracking *identifying information* for the containers. (A5253-56; A5332).

Just as it misinterpreted the patent’s specification, however, the district court misinterpreted ScriptPro’s prior arguments on appeal as a concession that the invention is limited to achieving the singular purpose of storing prescription containers “by patient name.” The court’s error lies in its belief that Munchkin’s reliance on the invention’s ability to “keep[] track of slot use by particular customers and slot availability” somehow requires the invention to execute collation based upon a specific type of identifier—i.e., collation “by patient name.” To the contrary, “keeping track of slot use by particular customers” requires only the existence of some identifying information for containers, not a particular type of identifying information.

For example, the invention would be operable to achieve all of its primary collation-based purposes if the identifying information for Patient Smith’s containers were not “Smith,” but Patient Smith’s phone number. By simply collating all of the containers with like phone numbers together, the invention would still track which slots Patient Smith’s containers occupy, and would thus be operable to track slot use “by particular customers” and ultimately “collate and store multiple containers for a patient within the same area.” In this regard,

virtually any identifier could be used to identify a patient's containers—e.g., date of birth, address, the letter “X,” or any code common to Patient Smith’s containers or keyed to Patient Smith’s prescriptions. (*Cf.* A77, at 11:48-50 (explaining that a script entered into the control system “is assigned a script number, wherein the script number identifies the particular patient name and medicament to be dispensed”)). The critical point is that “keeping track of slot use by particular customers and slot availability” is a function inherent to the collation of prescription containers, regardless of the type of identifier used.

The district court’s myopic focus on storage “by patient name” is a case of missing the proverbial forest (i.e., the *fact* of collation) for the trees (i.e., collation based upon a specific *type* of identifier). The specification discloses the former but does not mandate the latter. The district court missed this distinction altogether, and this error set the stage for its equally erroneous interpretation of the claims.

2. The district court improperly broadened the asserted claims by ignoring that they are expressly directed to “a collating unit.”

Just as the district court glossed over the specification’s focus on collation, it similarly ignored the critical fact that all of the asserted claims are expressly directed to “a collating unit.” By failing to give meaning to this critical term, which appears in preamble language that it had already construed, the court erroneously interpreted the claims to be far broader than they actually are.

Because the claims are all limited to “a collating unit,” however, they properly reflect the scope of the invention as described in the specification.

The district court is clear in its order that it gave no meaning to the term “collating unit” as it appears in the asserted claims. It expressly concluded that “the claims do not limit the ways in which the prescription containers are stored,” and that they “provide only that a collating unit will automatically store prescription containers.” (A8). But if the claims are directed to a unit that actually *collates* prescription containers, as the term “collating unit” dictates, these findings are false.

Indeed, the difference between mere automatic storage and collation is a primary aspect of the invention. As the specification explains, the prior art already contained systems that were “operable to automatically *store* . . . containers exiting the ADS.” (A72, at 2:66-3:1 (emphasis added)). But the invention of the ‘601 Patent solved certain problems with these prior art systems in part by “provid[ing] a *collating unit* that may be used with an existing static control center to automatically store prescription containers.” (A73, at 4:14-20 (emphasis added)). The specification also distinguishes between storage and collation when it states that there is a “need for a unit operable to *store* more than one container in a holding area,” and an additional, separate “need for a unit operable to *collate* multiple containers for a patient in one holding area.” (A73, at 3:64-4:1 (emphases

added)). Thus, as the specification explains, “the collating unit of the present invention can collate *and* store multiple containers for a patient within the same area.” (A74, at 6:38-39 (emphasis added)). In short, collation represents a substantive improvement apart from mere automatic storage.

The plain and ordinary meaning of the term confirms this fact. Merriam-Webster’s Collegiate Dictionary defines “collate” as “to assemble in proper order” or “to collect, compare carefully in order to verify, and often to integrate or arrange in order.” *Merriam-Webster’s Collegiate Dictionary*, “collate” (11th Ed.) (available at <http://www.merriam-webster.com/dictionary/collate>). This focus on “ordering” or “arranging” is consistent with the specification’s description of the invention’s collating function, which centers on the invention’s ability to collate “multiple containers for a patient within the same area.” (A74, at 6:38-39; *see* A73, at 3:66-4:1).

Notably, this meaning necessarily implies a scheme for ordering or arranging, as it would be impossible to order or arrange without a scheme of some kind. The specification is consistent with this fact, as well. As noted above, the collating unit of the ‘601 Patent collates “based on an organization scheme that accounts for identifying information of the container.” (A75, at 7:29-31; *see* A74, at 5:40-42, 6:12-14). Given all of this, the term “a collating unit” as it appears in

the asserted claims *does* limit the ways in which the invention stores prescription containers.⁶

And the district court in its claim construction order formally construed the preamble language containing the term “collating unit,” thereby rendering the preamble a limitation upon the claims. The court found that the preamble phrase “collating unit for automatically storing prescription containers dispensed by an automatic dispensing system” means “a collating device, used with a control center, capable of automatically storing prescription containers dispensed by an ADS.” (A1410-13). In doing so, the court in its claim construction order specifically recognized and highlighted the term “collating unit.” (See A1410-13 (“[T]he court acknowledges that the patent describes a ‘collating unit’ for use with a control center, not an ADS/collating unit in one.”)). Given this construction, the

⁶ ScriptPro submits that the ordinary meaning of the term “a collating unit” is clear and that therefore a formal construction is not necessary. However, should this Court deem a construction to be necessary or should Innovation dispute ScriptPro’s position with respect to the term, ScriptPro requests that the Court construe the term consistent with ScriptPro’s discussion herein. *Cf. Bancorp Servs., L.L.C. v. Sun Life Assur. Co. of Canada (U.S.)*, 687 F.3d 1266, 1274 (Fed. Cir. 2012) (“Although the district court declined to construe the claims, that does not preclude us from making that legal determination on appeal. . . [W]e may depart from the district court and adopt a new construction on appeal.”). In relevant part, ScriptPro submits that any such construction must align with the patent’s explanation that the invention is operable to collate—or arrange—“multiple containers for a patient in one holding area.” (See e.g. A73, at 3:66-4:1; A74, at 6:37-39).

court should not have ignored the term “collating unit” in its summary judgment order.

In addition, although not addressed by the district court, this Court’s relevant precedents confirm that the term “collating unit” should properly limit the claims. Language in a claim’s preamble limits the claim when, among other things, it is “necessary to give life, meaning, and vitality to the claim.” *Catalina Mktg. Intl., Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002) (quoting *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305 (Fed. Cir. 1999)). Both *Vizio, Inc. v. Intl. Trade Commn.*, 605 F.3d 1330 (Fed. Cir. 2010), and *Poly-America, L.P. v. GSE Lining Tech., Inc.*, 383 F.3d 1303 (Fed. Cir. 2004), are relevant here regarding this principle.

The Court in *Vizio* found that the phrase “[a] method for decoding MPEG compatible packetized program information . . .” appearing in certain claims’ preambles served as “an essential limitation” to the claims. 605 F.3d at 1341. The Court specifically explained that “the ‘for decoding’ language . . . is properly construed as a claim limitation, and not merely a statement of purpose or intended use for the invention, because ‘decoding’ is the essence or a fundamental characteristic of the claimed invention.” *Id.* at 1340-41. Thus, the Court explained that the method claimed would have little meaning without the intended objective stated in the preamble, and that ignoring the preamble would effectively broaden

the claims to cover far more than the specification or prosecution history indicated was intended. *Id.* at 1341.

In *Poly-America*, the Court found that the phrase “blown-film” in the preamble of claims directed to a blown-film landfill liner was “a fundamental characteristic of the claimed invention that is properly construed as a limitation of the claim itself.” 383 F.3d at 1310. Much like the reasoning in *Vizio*, the Court emphasized the extent to which the patent’s specification referred to the invention as a “blown-film” liner:

The specification is replete with references to the invention as a “blown-film” liner, including the title of the patent itself and the “Summary of the Invention.” The phrase is used repeatedly to describe the preferred embodiments, and the entire preamble “blown-film textured liner” is restated in each of the patent’s seven claims. Our analysis shows that the inventor considered that the “blown-film” preamble language represented an important characteristic of the claimed invention.

Id.

Like the preambles at issue in *Vizio* and *Poly-America*, the term “a collating unit” recites an essential limitation of the claims of the ‘601 Patent. Indeed, as discussed at length herein, collation is not merely a statement of purpose or intended use for the invention, but is instead a fundamental characteristic of the claimed invention. In fact, the *Poly-America* Court’s reasoning applies verbatim to the preamble language here—the patent’s title, summary of invention, and preferred embodiment repeatedly refer to the invention as “a collating unit,” and

every claim's preamble recites "a collating unit." *See* 383 F.3d at 1310. It is therefore clear that the inventors considered the "a collating unit" preamble language to represent an important characteristic of the claimed invention.

In sum, given that each of the asserted claims expressly recites "a collating unit," the district court erred in concluding that "the claims do not limit the ways in which the prescription containers are stored." (A8).

3. Properly interpreted, there is no discrepancy between the specification and the asserted claims.

Because the specification discloses a collating unit but does not mandate collation "by patient name," and because the claims limit the manner of storing containers by reciting "a collating unit," there is no discrepancy between the specification and claims—and no written description problem.

More specifically, because the asserted claims recite "a collating unit," the relevant claimed subject matter is a unit that, among other things, assembles or arranges "multiple containers for a patient in one holding area," (though without any requirement of collation "by patient name"). (*See* pp. 26-27, *supra*). The specification reasonably conveys that the inventors had possession of this subject matter. In fact, it expressly conveys as much when it explains, for example, that "[t]he collating unit is operable to automatically store filled prescription containers . . . based on an organization scheme that accounts for identifying information of the container, such as a patient name for whom the container is intended or a

prescription number of the container.” (A75, at 7:26-32). The claims and the specification are aligned in this regard, and the specification therefore “reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.” *Hynix Semiconductor*, 645 F.3d at 1351 (internal quotation omitted).

It is not necessary for the asserted claims to recite limitations requiring a particular organization scheme, because the types of identifying information referenced in the specification (e.g., “patient name,” etc.) are merely preferred embodiments, as discussed above. (*See* pp. 20-22, *supra*). That the specification presents collation by patient name as a preferred or optional feature does not indicate a lack of support for claims that do not require collation by patient name, as “it is well settled that device claims are not limited to devices which operate precisely as the embodiments described in detail in the patent.” *Virginia Panel Corp. v. MAC Panel Co.*, 133 F.3d 860, 866 (Fed. Cir. 1997).

It is not necessary for the asserted claims to recite limitations requiring an organization scheme generally, either. As discussed above, collation itself necessarily includes an organization scheme, so the fact that the claims do not expressly recite as much does not render them broader than the specification. Likewise, “it is not necessary that a claim recite each and every element needed for the practical utilization of the claimed subject matter.” *Bendix Corp. v. U. S.*, 600

F.2d 1364, 1369 (Ct. Cl. 1979); *see also Rambus Inc. v. Infineon Technologies Ag*, 318 F.3d 1081, 1093 (Fed. Cir. 2003) (stating that a patent's claims "need not recite every component necessary to enable operation of a working device"). Thus, the asserted claims need not recite an organization scheme simply because the specification explains that the invention utilizes one.

Finally, given the district court's failure to properly interpret the specification and claims, the cases it cited in its opinion provide no support to its conclusion. (*See A7-8*). In *Gentry Gallery, Inc. v. Berkline Corp.*, 134 F.3d 1473, 1480 (Fed. Cir. 1998), for example, the Court found the specification to be limiting because it "unambiguously limited" the placement of a recliner's controls to a console. Here, however, the specification does not "unambiguously limit" the type of identifier used in collation. (*See pp. 19-25, supra*). As such, and because collation by patient name is not "the only possible" way to collate containers, *Gentry Gallery* is inapplicable. *See Gentry Gallery*, 134 F.3d at 1479.

The decision in *ICU Medical, Inc. v. Alaris Med. Sys., Inc.*, 558 F.3d 1368 (Fed. Cir. 2009), is inapplicable for the same reason. The Court there found that the invention was limited to medical valves with spikes because "the specification describes only medical valves with spikes." *Id.* at 1378. The specification here specifically identifies at least two possible identifiers for prescription containers,

however, and it further uses open-ended language that signifies that the inventors envisioned other possible identifiers, as well. (*See* pp. 20-22, *supra*).

In the end, there is no basis in fact or law upon which to conclude that the asserted claims of the ‘601 Patent lack written description support for failure to recite a limitation requiring collation “by patient name.”

C. The original claims of the ‘601 Patent, which are part of the specification, did not require storage “by patient name.”

The original claims of the ‘601 Patent also expose and undercut the district court’s—and Innovation’s—reading of the ‘601 Patent. Like the asserted claims themselves, the original, as-filed versions of the asserted claims of the ‘601 Patent did not recite any limitations requiring collation “by patient name.” (A4554-58, A4580-85). Rather, the original claims—again like the asserted claims themselves—expressly recited “a collating unit.” (A4580-85).

As this Court and its predecessor court have long-recognized, “[o]riginal claims are part of the specification and in many cases will satisfy the written description requirement.” *Crown Packaging*, 635 F.3d at 1380; *see In re Koller*, 613 F.2d 819, 823 (CCPA 1980) (“[O]riginal claims constitute their own description.”). This case is one of the “many cases” in which the original claims satisfy the written description requirement, as the *Crown Packaging* decision reveals.

The two patents at issue in *Crown Packaging* shared a common specification that described two ways to save metal when seaming can bodies and can ends: increasing the slope of the can end chuck wall and limiting the width of the reinforcing bead. 635 F.3d at 1375-77. The asserted claims covered an improvement in metal usage by increasing the slope of the chuck wall, but contained no additional limitation requiring a narrowing of the width of the reinforcing bead. *Id.* at 1379. The defendant argued that while the specification described increasing the slope of the chuck wall and limiting the width of the reinforcing bead, it did not describe increasing the slope of the chuck wall without also limiting the width of the reinforcing bead. *See id.* at 1378, 1379. The district court agreed, and therefore held the asserted claims invalid as failing to satisfy the written description requirement. *Id.* at 1379.

This Court reversed on appeal. It first assessed the specification, concluding that “[n]owhere does the specification teach that metal savings can only be achieved by increasing the chuck wall angle along with narrowing the reinforcing bead.” *Crown Packaging*, 635 F.3d at 1381. It then turned to the original claims and noted that certain of the patent’s original, as-filed claims contained no limitation requiring a narrowing of the width of the reinforcing bead. *Id.* at 1380. Thus, after recognizing that “[o]riginal claims are part of the specification,” the Court reasoned that the lack of such limitations in the patentee’s original claims

“clearly show that the applicants recognized and were claiming an improvement in metal usage by increasing the slope of the chuck wall over that used in the prior art without any additional limitation of narrowing the width of the reinforcing bead.”

Id.

Crown Packaging is directly on-point. Just as the defendant there argued that the specification supported metal usage improvements requiring a narrowing of a reinforcing bead but not improvements that do not require such a narrowing, the district court here concluded that the specification supports units requiring collation “by patient name,” but not units that do not require this specific type of collation. And just as certain of the original claims of the patents in *Crown Packaging* did not require a narrowing of a reinforcing bead, the original claims of the ‘601 Patent did not require storage “by patient name.”⁷ (See A4580-85).

The original claims of the ‘601 Patent therefore confirm what is already clear from the specification itself—the inventors recognized and were claiming a

⁷ Just as this case is like *Crown Packaging*, it is conspicuously unlike other cases in which this Court has held that original claims alone do not satisfy the written description requirement. Those cases are primarily complex chemical cases involving “generic claim[s] [that] define the boundaries of a vast genus of chemical compounds” using only functional language. *Ariad Pharm., Inc. v. Eli Lilly and Co.*, 598 F.3d 1336, 1349 (Fed. Cir. 2010); *see Enzo Biochem, Inc. v. Gen-Probe Inc.*, 323 F.3d 956, 968-69 (Fed. Cir. 2002). The claims here, like the claims in *Crown Packaging* (635 F.3d at 1380), are not broad genus claims or function claims simply describing a desired result. (See e.g. A79, at 15:57 – 16:2; A83, at 1:25-46).

unit that collates prescription containers without any additional limitation requiring collation “by patient name.” Notably, in previously reversing the district court’s first written description ruling in this case this Court stated that “[w]hen a specification is ambiguous about which of several features are stand-alone inventions, the original claims can help resolve the ambiguity.” *ScriptPro I*, 762 F.3d at 1361. It went on to find that “[h]ere, original claims omit a sensor requirement, an omission that fits the bases in the specification for deeming sensors to be merely optional.” *Id.*

Although ScriptPro on this appeal submits that the specification is clear in not mandating storage by patient name, the omission of “patient name” limitations in the original claims of the ‘601 Patent once again fits the bases in the specification for deeming collation by patient name to be merely optional.

CONCLUSION AND STATEMENT OF RELIEF

Innovation bears a heavy burden to invalidate the asserted claims of the ‘601 Patent. The district court’s order does not sustain the weight of that burden. Its exceedingly brief examination of the specification and the asserted claims led to its misinterpretation of both. A proper reading of the specification and the asserted claims reveals that they both require collation, but do not mandate collation according to a single, specific type of identifying information. As a result, there is

no discrepancy in scope as between the two, and the specification adequately supports the claims.

At bare minimum, the district court should not have concluded that the asserted claims lacked written description support *as a matter of law*. A reasonable trier of fact could find, for example, that the specification does not unambiguously limit the invention to one that requires collation “by patient name,” or that the original claims taken together with the specification indicate that the inventors possessed the claimed subject matter.

As such, ScriptPro respectfully requests that the Court hold that the ‘601 Patent satisfies the written description requirement vis-à-vis the issues addressed in the district court’s summary judgment order, and reverse the order accordingly. In the alternative, ScriptPro respectfully requests that the Court hold that fact issues remain concerning the written description issues addressed in the district court’s summary judgment order, and reverse the order accordingly. ScriptPro further respectfully requests that the Court grant such other relief as it deems just and proper.

Respectfully Submitted,

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ADDENDUM

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF KANSAS**

SCRIPTPRO LLC,)
v.)
Plaintiff,)
INNOVATION ASSOCIATES, INC.,)
Defendant.)
Case No. 06-2468-CM

MEMORANDUM AND ORDER

This patent infringement case—originally filed in 2006—has a substantial history. Most recently, the Federal Circuit reversed this court’s ruling that claims 1, 2, 4, and 8 of plaintiff ScriptPro LLC’s patent were invalid for lack of an adequate written description. The Federal Circuit remanded the case for further proceedings. After remand, this court reinstated a number of motions that were pending before the appeal, and defendant Innovation Associates, Inc. filed another motion for summary judgment on the issue of invalidity (Doc. 410).

I. General Factual and Procedural Background

As the court has previously explained, both ScriptPro and Innovation sell robots that automatically fill prescriptions for pharmacies (Automatic Dispensing Systems, or “ADSs”). ScriptPro holds a patent for and sells a “collating unit” that attaches to an ADS and sorts output into holding areas grouped by patient to the extent feasible. This patent—Patent No. 6,910,601 (“the ’601 patent”—is named “Collating Unit for Use With a Control Center Cooperating With an Automatic Prescription or Pharmaceutical Dispensing System.” ScriptPro claims that Innovation’s robot, ROBOTx, infringes on claims 1, 2, 4, and 8 of its patent.

Shortly after ScriptPro filed this lawsuit, Innovation initiated Inter Partes Reexamination No. 95/000,292 with respect to the '601 patent, and the case was stayed from May 2007 until July 2010. An Inter Partes Reexamination Certificate was issued with respect to the '601 patent on January 4, 2011. Through reexamination, claim 4 was rewritten in independent form but was not amended substantively. Independent claims 1 and 2 were substantively amended.

This court previously held that the relevant claims lacked written description support. *ScriptPro LLC v. Innovation Assocs., Inc.*, No. 06-2468-CM, 2012 WL 2402778, at *7 (D. Kan. June 26, 2012), *rev'd*, 762 F.3d 1360 (Fed. Cir. 2014). To reach this decision, the court concluded that the specification describes a machine containing sensors, but Claims 1, 2, 4, and 8 addressed a machine that did not require sensors. *Id.* The Federal Circuit disagreed, holding that a skilled artisan could reasonably understand the specification to refer to optional sensors—as opposed to required sensors. *ScriptPro, LLC*, 762 F.3d at 1360.

II. Standards

Summary judgment is appropriate if the moving party demonstrates that there is “no genuine issue as to any material fact” and that it is “entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). In applying this standard, the court views the evidence and all reasonable inferences therefrom in the light most favorable to the nonmoving party. *Adler v. Wal-Mart Stores, Inc.*, 144 F.3d 664, 670 (10th Cir. 1998) (citing *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 587 (1986)). The moving party bears the initial burden of demonstrating an absence of a genuine issue of material fact and entitlement to judgment as a matter of law. *Id.* at 670–71. Once the movant has met this initial burden, the burden shifts to the nonmoving party to “set forth specific facts showing that there is a genuine issue for trial.” *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 256 (1986); *see Adler*, 144 F.3d at 671 n.1 (concerning shifting burdens on summary judgment).

III. Factual Background Specific to this Motion¹

Resolution of this motion depends on language in the patent itself. To help explain how ScriptPro's invention works, the court summarizes several portions of the '601 patent that discuss the process for storing prescription containers.

- **Prior Art Methods:** The background of the invention indicates that "prior art automated control centers store the container based on a prescription number associated with the container, as opposed to storing the container based on a patient name for whom the container is intended." (Doc. 402-1 at col.2 l.66–col.3 l.10.)
- **Collating Unit's Function:** The invention's summary states that:

the present invention provides a collating unit that may be used with an existing static control center to automatically store prescription containers, such as prescription vials and unit-of-use packages containing medicaments, exiting an ADS. The unit stores prescription containers according to a storage algorithm that is dependent on a patient name for whom a container is intended and an availability of an open storage position in the collating unit.

(Id. col.4 l.22–l.25.)

- **Use of Control System:** The summary also provides that when a prescription container enters the collating unit from the automatic dispensing unit, "[t]he control system next determines in which holding area to store the container." (Id. col.5 l.46–l.47).
- **Composition of Control System:** The specification of the '601 patent explains:

The control system 28 broadly includes a computing device 92, such as a computer, an infeed conveyor controller 94, a collating unit conveyor controller 96, a guide arm controller 98 for each guide arm 24, a sensor controller 100 for each sensors 26, a central sensor controller 102 for controlling operating of each of the individual sensor controllers 100, an

¹ The court construes the facts in the light most favorable to the nonmoving party pursuant to Fed. R. Civ. P. 56. The court reviewed the facts proposed by both parties, and included only those that are relevant, material, and properly supported by the record. The court includes additional facts as necessary in its discussion of the arguments.

input device 104, such as a keyboard, keypad, fingerprint reader, mouse, etc., an indicia reader 106, such as a bar code reader, and at least one display 108, such as a computer monitor, that serves as an operator interface.

The computing device 92 may broadly comprise any processor capable of being programmed and preferably also includes a memory 110 on which at least one database 112 may be stored. The computing device 92 communicates with and controls operation of the other components of the control system 28.

(*Id.* col.10 l.62–col.11 l.11.)

- **Container Storage Process:** The Detailed Description of the Preferred Embodiments discusses the storage process:

- “When the collating unit 10 is initially empty, the control system 28 instructs the first container exiting the ADS 14 be stored in the first available holding area 22.” (*Id.* col.12 l.18–l.20).
- “After the control system 28 instructs the first container to be stored in the holding area 22, the control system 28 instructs an indicator 114 proximate to the area 22 to display identifying information for the container, such as the patient name and script number.” (*Id.* col.12 l.53–l.57).

- The process of storing a second container is as follows:

To store a second container in the collating unit 10, the control system 28 first determines if the second container is for the same patient as the first container, as depicted in Box 8A of FIG. 8. If the second container is not for the same patient as the first container, the control system 28 will not store the second container in the same holding area 22 in which the first container was stored, since the control system 28 will not store containers for different patients in the same holding area 22. Thus, the control system 28 instructs the second container to be stored in the first empty holding area 22, as depicted in Box 8B.

(*Id.* col.12 l.63–col.13 l.6).

IV. Analysis

A. Law Governing the Written-Description Requirement

Once again, the court looks to the written-description requirement to resolve Innovation's motion. This requirement is contained in Section 112 of the Patent Act. The first paragraph of that section provides:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

35 U.S.C. § 112; *see also Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc) (requiring that a specification disclosure "clearly allow a person of ordinary skill in the art to recognize that the inventor invented what is claimed.") (internal quotation marks omitted).

"[T]he purpose of the written description requirement is to 'ensure that the scope of the right to exclude, as set forth in the claims, does not overreach the scope of the inventor's contribution to the field of art as described in the patent specification.'" *Univ. of Rochester v. G.D. Searle & Co.*, 358 F.3d 916, 920 (Fed. Cir. 2004) (quoting *Reiffin v. Microsoft Corp.*, 214 F.3d 1342, 1345 (Fed. Cir. 2000)). A broad claim may be invalid if supported by a much more narrow specification. *Cooper Cameron Corp. v. Kvaerner Oilfield Prod., Inc.*, 291 F.3d 1317, 1323 (Fed. Cir. 2002) ("[A] broad claim is invalid when the entirety of the specification clearly indicates that the invention is of much narrower scope." (citing *Gentry Gallery, Inc. v. Berkline Corp.*, 134 F.3d 1473 (Fed. Cir. 1998))); *Tronzo v. Biomet, Inc.*, 156 F.3d 1154, 1158–59 (Fed. Cir. 1998) (holding that claims lacked written description support when they discussed a generically-shaped cup, but the specification described the invention as a conical-shaped cup, distinguished prior art that used other shapes, and identified the advantages of the conical-shaped cup). The scope of the claims must not exceed the scope of the

invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1321 (Fed. Cir. 2005) (“The patent system is based on the proposition that the claims cover only the invented subject matter.”).

To determine whether the written-description requirement is met, the court (or a jury) objectively looks within the four corners of the specification. *Ariad*, 598 F.3d at 1351; *see also Centocor Ortho Biotech, Inc. v. Abbott Labs.*, 636 F.3d 1341, 1348 (Fed. Cir. 2011). The accused infringer must show by clear and convincing evidence that the claims lack written description support. *Hynix Semiconductor Inc. v. Rambus Inc.*, 645 F.3d 1336, 1351 (Fed. Cir. 2011); *see also Ateliers de la Haute-Garonne v. Broetje Automation USA Inc.*, 717 F.3d 1351, 1356 (Fed. Cir. 2013); *Ariad*, 598 F.3d at 1354.

The sufficiency of a patent’s written description is ordinarily a question of fact, *Ariad*, 598 F.3d at 1355, but “[a] patent also can be held invalid [as a matter of law] for failure to meet the written description requirement based solely on the face of the patent specification.” *Centocor Ortho Biotech, Inc.*, 636 F.3d at 1347; *Atl. Research Mktg. Sys., Inc. v. Troy*, 659 F.3d 1345, 1353 (Fed. Cir. 2011) (“Although compliance with the written description requirement is a question of fact, this issue is amenable to summary judgment in cases where no reasonable fact finder could return a verdict for the non-moving party.” (quotation omitted)).

B. Application of the Law to this Case

The Federal Circuit reversed this court’s previous decision that the claims lacked written support. But in its order, the appellate court signaled that the claims might lack written support for another reason. Specifically, the Federal Circuit wrote that it was not deciding “questions that might be raised by the generality of the claim language,” and noted, “It is not immediately apparent how the claim language . . . requires any means of achieving [a central purpose of the invention].” *ScriptPro, LLC*, 762 F.3d at 1361. Based on (1) these comments, (2) ScriptPro’s representations on appeal, and

(3) the appellate court's ultimate decision, Innovation filed its second motion based on invalidity. Innovation now argues that the claims lack written description support because they "lack any component for keeping track of what slots are open and what slots are being used for a particular patient." (Doc. 411 at 1.) In other words, the specification indicates that the prescription containers are stored based on patient name and slot availability, but the claims state only that the invention stores prescription containers. Without a limitation on the type of storage, Innovation argues, the broad claims are not supported by the much-more-detailed specification.

Several cases guide this court's decision. First, *Gentry Gallery, Inc. v. Berkline Corp.*: This case involved an invention of dual recliners (within a sectional sofa) that faced the same direction, separated by a console. 134 F.3d at 1474–75. The written description specified that the recliner controls were on the console. *Id.* at 1479. The claims, however, were not so limited. *Id.* at 1475. According to the disclosure, the console's sole purpose was to house the controls. *Id.* at 1479. The court therefore observed that locating the recliner controls anywhere other than the console was outside the stated purpose of the invention. *Id.* Finding the claims invalid, the court noted that "[c]laims may be no broader than the supporting disclosure, and therefore [] a narrow disclosure will limit claim breadth." *Id.* at 1480.

Second, *ICU Medical, Inc. v. Alaris Medical Systems, Inc.*: Here, the Federal Circuit affirmed a determination of invalidity when the claims lacked a limit that the specification included. 558 F.3d 1368, 1378 (Fed. Cir. 2009). The patent involved medical valves that contained an internal spike. *Id.* at 1378. But the claims did not require a spike. *Id.* According to the court:

[The plaintiff's] asserted spikeless claims are broader than its asserted spike claims because they do not include a spike limitation; these spikeless claims thus refer to medical valves generically—covering those valves that operate with a spike and those that operate without a spike. But the specification describes only medical valves with spikes. We reject [the plaintiff's] contention that the figures and descriptions that include spikes somehow demonstrate that the inventor possessed a medical valve that

operated without a spike. Based on this disclosure, a person of skill in the art would not understand the inventor of the '509 and '592 patents to have invented a spikeless medical valve.

Id. (internal citation omitted).

Third, *Clare v. Chrysler Group LLC*: Although this case is from another district court, the court still finds its reasoning persuasive. In *Clare*, the specification discussed hidden storage in the bed of a pickup. No. 13-11225, 2014 WL 6886292, at *10 (E.D. Mich. Dec. 4, 2014). The fact that the storage was hidden was “an essential element of the invention.” *Id.* But the claims did not “limit the visibility of the storage.” *Id.* Because the claims were broader than the specification, the court held that they violated the written description requirement. *Id.*

The court now applies the rationale of these cases to the instant case. Here, the '601 patent's specification limits how the invention automatically stores prescription containers. The collating unit uses an algorithm to store containers based on patient names and the availability of an open position. (Doc. 411-2 col.4 l21–l25.) And one of its central purposes is to collate and store prescriptions by patient. *See ScriptPro, Inc.*, 762 F.3d at 1361. But the claims do not limit the ways in which the prescription containers are stored. They do not specify any type of collation or storage. For example, claim 1 identifies “[a] collating unit configured to automatically store therein prescription containers dispensed by an automatic dispensing system, the collating unit comprising . . . a control system for controlling operation of the infeed conveyor and the plurality of guide arms” (Doc. 411-2 col.1 1.25–1.41.) The court will not reproduce the text of claims 2, 4, and 8, but they are similarly general. They provide only that a collating unit will automatically store prescription containers, and that the collating unit includes a control system. They do not specify that the items are collated and stored by patient names and open positions. Instead, they reference only a control system “for controlling

operation of the infeed conveyor and the plurality of guide arms" (and, for claim 8, for also controlling the collating unit conveyor). (*Id.* col.1 l.25–col.2 l.35; Doc. 411-1 col.16 l.34–l.52.)

These broad claims are not supported by the much-more-limited specification. They do not require that the control system organize containers based on patient name and space availability. During its appeal, ScriptPro repeatedly emphasized a central purpose of the '601 patent: to "keep[] track of slot use by particular customers and slot availability." *See ScriptPro, Inc.*, 762 F.3d at 1361. This means that the use of any other method for automatic storage is outside this purpose. Based on the broad claim language that is outside a central purpose of the patent, the court determines that no reasonable jury could find the written-description requirement met.

ScriptPro contends that every claim does not have to support the purpose of the invention. *See Praxair, Inc. v. ATMI, Inc.*, 543 F.3d 1306, 1325 (Fed. Cir. 2008) ("An invention may possess a number of advantages or purposes, and there is no requirement that every claim directed to that invention be limited to encompass all of them." (internal quotation marks and citation omitted)). In any event, ScriptPro argues, keeping track of slot use by particular customers and slot availability is only one of several goals. But ScriptPro does not identify any alternate goals.

The court finds ScriptPro's argument unpersuasive. While every claim need not encompass every goal, here the claims do not address one of the invention's central goals—one that ScriptPro repeatedly emphasized on appeal. It is disingenuous for ScriptPro to now downplay the significance of the goal. Without including a limitation to address the storage by patient name, the claims are simply too broad to be valid.

ScriptPro also contends that resolution of this issue is obvious. The claims reference a "control system." It is this system that tells the containers where to go for storage. To this end, ScriptPro contends that the control system inherently contains a computing device. The inherent inclusion of a

computing device is a point of contention between the parties. But it is not one that the court must resolve here. Regardless of whether the claims refer to a control system, they do not specify that the control system directs storage of the containers based on patient name. That is the critical missing element.

IT IS THEREFORE ORDERED that defendant Innovation Associates, Inc.'s Motion for Summary Judgment of Invalidity (Doc. 410) is granted.

IT IS FURTHER ORDERED that all other pending motions are terminated as moot.

Dated this 30th day of March, 2015, at Kansas City, Kansas.

s/ Carlos Murguia
CARLOS MURGUIA
United States District Judge



US006910601B2

(12) **United States Patent**
 Thomas et al.

(10) **Patent No.:** US 6,910,601 B2
 (45) **Date of Patent:** Jun. 28, 2005

(54) **COLLATING UNIT FOR USE WITH A CONTROL CENTER COOPERATING WITH AN AUTOMATIC PRESCRIPTION OR PHARMACEUTICAL DISPENSING SYSTEM**

(75) Inventors: **Tracy I. Thomas**, Overland Park, KS (US); **Michael E. Coughlin**, Mission Hills, KS (US)

(73) Assignee: **ScriptPro LLC**, Mission, KS (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 177 days.

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(51) **Int. Cl.**⁷ **B65G 59/00**

(52) **U.S. Cl.** **221/119; 700/244**

(58) **Field of Search** **221/119, 123, 221/253; 700/244**

(56) **References Cited**

U.S. PATENT DOCUMENTS

341,045 A 11/1886 Igel et al.
 1,128,561 A 2/1915 Webendorfer

(Continued)

FOREIGN PATENT DOCUMENTS

AU	99676775	5/1997
DE	4235047	4/1994
EP	282785 A	9/1988
EP	0471530	12/1991
EP	0827733	8/1997

EP	0924676	10/1998
FR	1449591	8/1966
GP	2109137	5/1983
JP	53145260	12/1978
JP	0043743	3/1984
JP	3031965	2/1991
JP	3240602	10/1991

(Continued)

OTHER PUBLICATIONS

Guerra, Lawrence E.; U.S. Appl. No. 10/896,477; filed Jul. 22, 2004; Fork Based Transport Storage System for Pharmaceutical Unit.

(Continued)

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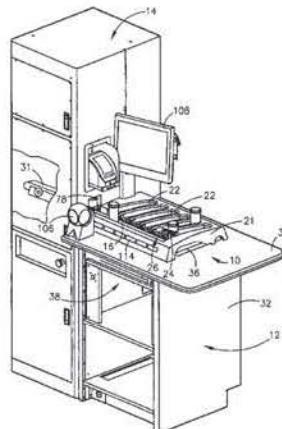
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(57)

ABSTRACT

A collating unit (10) for use with a control center (12) cooperating with an automatic dispensing system ("ADS") (14) for automatic storage of prescription containers dispensed from the ADS (14). The collating unit (10) broadly comprises an infeed conveyor (16) for transporting the prescription containers from the ADS (14) to the collating unit (10); a base (18) housed within the control center (12) and positioned generally adjacent to the infeed conveyor (16); a collating unit conveyor (20) mounted on the base (18); a frame (21) substantially surrounding and covering the infeed conveyor (16) and the base (18); a plurality of holding areas (22) formed within the frame (21); a plurality of guide arms (24) mounted on the base (18) between the infeed conveyor (16) and the collating unit conveyor (20) and operable to maneuver the containers from the infeed conveyor (16) into the plurality of holding areas (22); a plurality of sensors (26) to sense the presence of the containers within the collating unit (10); and a control system (28) for controlling operation of the infeed conveyor (16), the collating unit conveyor (20), the guide arms (24), and the sensors (26).

21 Claims, 7 Drawing Sheets



US 6,910,601 B2

Page 2

U.S. PATENT DOCUMENTS

2,088,038 A	7/1937	Scott et al.	5,463,839 A	11/1995	Stange et al.
2,137,501 A	11/1938	Myers	5,481,265 A	1/1996	Russell
2,178,000 A	10/1939	Slehrs	5,493,805 A	2/1996	Penuela et al.
2,348,927 A	5/1944	Runsvold et al.	5,512,879 A	4/1996	Stokes
2,690,856 A	10/1954	Trondle	5,562,232 A	10/1996	Pearson
2,781,947 A	2/1957	Webster et al.	5,597,995 A	1/1997	Williams et al.
2,929,532 A	3/1960	Tonelli	5,621,384 A	4/1997	Crimmins et al.
3,045,864 A	7/1962	Hurst et al.	5,629,981 A	5/1997	Nerlikar
3,069,654 A	12/1962	Hough	5,671,592 A	9/1997	Yuyama et al.
3,166,177 A	1/1965	Laverty	5,682,032 A	10/1997	Philipp
3,193,196 A	7/1965	Merrill et al.	5,700,998 A	12/1997	Palti
3,206,062 A	9/1965	Rappaport	5,706,026 A	1/1998	Kent et al.
3,215,310 A	11/1965	Hurst et al.	5,713,485 A	2/1998	Liff et al.
3,277,998 A	10/1966	Medoff	5,713,487 A	2/1998	Coughlin
3,368,713 A	2/1968	Hurst et al.	5,718,525 A	2/1998	Bruhnke et al.
3,400,857 A	9/1968	Schubert	5,720,154 A	* 2/1998	Lasher et al. 53/411
3,603,327 A	9/1971	Buchholz et al.	5,762,235 A	6/1998	Coughlin
3,677,437 A	7/1972	Haigler	5,771,657 A	6/1998	Lasher et al.
3,692,211 A	9/1972	Flubacker	5,781,511 A	7/1998	Yasukawa et al.
3,719,288 A	3/1973	Schmitt et al.	5,797,515 A	8/1998	Liff et al.
3,746,211 A	7/1973	Burgess, Jr.	5,798,020 A	8/1998	Coughlin et al.
3,782,590 A	1/1974	Apfel	5,812,410 A	9/1998	Lion et al.
3,823,844 A	7/1974	Linkemer et al.	5,832,296 A	11/1998	Wang et al.
3,837,139 A	9/1974	Roseberg	5,845,264 A	12/1998	Nellhaus
3,871,156 A	3/1975	Koenig et al.	5,860,563 A	1/1999	Guerra et al.
3,885,702 A	5/1975	Joslin et al.	5,873,488 A	2/1999	Guerra
3,917,045 A	11/1975	Williams et al.	5,883,370 A	3/1999	Walker et al.
3,921,196 A	11/1975	Patterson	5,884,806 A	3/1999	Boyer et al.
3,985,264 A	10/1976	Shaw et al.	5,897,024 A	4/1999	Coughlin et al.
3,997,063 A	12/1976	Adams et al.	5,903,225 A	5/1999	Schmitt et al.
4,013,192 A	3/1977	Pillon	5,907,493 A	5/1999	Boyer et al.
4,018,358 A	4/1977	Johnson et al.	5,929,530 A	9/1999	Lupien, Jr. et al.
4,247,019 A	1/1981	Lerner	5,963,453 A	10/1999	East
4,264,396 A	4/1981	Steward	6,006,946 A	12/1999	Williams et al.
4,284,301 A	8/1981	Geiger et al.	D418,494 S	1/2000	Robb
4,386,860 A	6/1983	Price et al.	6,036,017 A	3/2000	Bayliss, IV
4,468,277 A	8/1984	Kontz	6,036,812 A	3/2000	Williams et al.
4,476,381 A	10/1984	Rubin	6,039,251 A	3/2000	Holowko et al.
4,546,901 A	10/1985	Buttarazzi	6,070,140 A	5/2000	Tran
4,615,350 A	10/1986	Boudville	6,075,189 A	6/2000	Robb
4,660,824 A	4/1987	Hermkens et al.	6,085,938 A	7/2000	Coughlin
4,714,515 A	12/1987	Hoffmann	6,119,737 A	9/2000	Yuyama et al.
4,753,473 A	6/1988	Arnett	6,155,485 A	12/2000	Coughlin et al.
4,787,803 A	11/1988	van Elten et al.	6,161,721 A	12/2000	Kudera et al.
4,803,487 A	2/1989	Willard et al.	6,206,590 B1	3/2001	Thomas et al.
4,810,230 A	3/1989	Shirasawa	D440,570 S	4/2001	Schneider
4,811,764 A	3/1989	McLaughlin	6,225,988 B1	5/2001	Robb
4,812,629 A	* 3/1989	O'Neil et al. 235/383	6,249,277 B1	6/2001	Varveris
4,835,372 A	5/1989	Gombrich et al.	6,310,542 B1	10/2001	Gehlot
4,851,072 A	7/1989	Kontz	6,318,630 B1	11/2001	Coughlin et al.
4,857,716 A	8/1989	Gombrich et al.	6,320,570 B2	11/2001	Robb
4,868,409 A	9/1989	Tanaka et al.	6,343,711 B1	2/2002	Coughlin
4,869,394 A	9/1989	Hurst	6,346,886 B1	2/2002	De La Huerga
4,872,803 A	10/1989	Asakawa	D458,933 S	6/2002	Schneider
4,902,263 A	2/1990	Ito et al.	6,421,584 B1	7/2002	Norberg et al.
4,918,604 A	4/1990	Baum	6,477,442 B1	11/2002	Valerino, Sr.
4,954,817 A	9/1990	Levine	6,478,185 B2	11/2002	Kodama et al.
4,958,280 A	9/1990	Pauly et al.	6,526,158 B1	2/2003	Goldberg
5,007,085 A	4/1991	Greanias et al.	6,533,480 B2	3/2003	Schneider
5,033,785 A	7/1991	Woolley, Jr.	6,564,104 B2	5/2003	Nelson et al.
5,082,268 A	1/1992	Santoro	6,574,580 B2	6/2003	Hamilton
5,194,857 A	3/1993	Gomez	6,575,596 B2	6/2003	Butt
5,208,762 A	5/1993	Charhut et al.	6,578,734 B1	6/2003	Coughlin
5,323,677 A	6/1994	Knutson	6,587,090 B1	7/2003	Jarra
5,332,275 A	7/1994	Conway et al.	6,592,005 B1	7/2003	Coughlin et al.
5,335,664 A	8/1994	Nagashima	6,600,418 B2	7/2003	Francis et al.
5,337,919 A	8/1994	Spaulding et al.	6,624,739 B1	9/2003	Stobbe
5,348,061 A	9/1994	Riley et al.	6,692,211 B2	2/2004	Yuyama et al.
5,401,059 A	3/1995	Ferrario	6,695,207 B1	2/2004	Norris, Jr.
5,453,759 A	9/1995	Seebach	6,703,918 B1	3/2004	Kita
			6,724,690 B1	4/2004	Endo et al.

US 6,910,601 B2

Page 3

6,774,796 B2 8/2004 Smith
 2003/0142588 A1 7/2003 Kawatahara

FOREIGN PATENT DOCUMENTS

JP	4174061	6/1992
JP	6127635	5/1993
JP	6315521	11/1994
JP	7187165	7/1995
JP	8007058	1/1996
JP	8115376	5/1996
JP	9034964	2/1997
JP	9202301	8/1997
JP	9231342	9/1997
JP	09259344 A	10/1997
JP	11296727 A	10/1997
JP	10059336	3/1998
SU	918086	4/1982
WO	9422580	10/1994
WO	9529455	11/1995
WO	9809598	3/1998

OTHER PUBLICATIONS

Coughlin, Michael E.; U.S. Appl. No. 09/457,286; filed Dec. 8, 1999; Automatic Dispensing System for Unit Medicament Packages.

Knutsen, Bernhard P.; U.S. Appl. No. 10/869,595; filed Jun. 16, 2004; RFID Tag and Method of User Verification.

Fred Levit, Daniel Garside; Computer-Assisted Prescription Writing; Dec. 30, 1976.

National Institutes of Health; Prescription-Writing with a PC; Jun. 10, 2003.

Packaging Week Interpak; Integrated Cartoning and Labeling System; Jul. 1996.

Roerig, CS; Assembly Automation; Automatic Pharmaceutical Inspection; 1993.

Alton Rosemary; Assembly Automation; Verification of Automated Pack Assembly; 1993.

Chain Store Age Executive; Longs Drug Stores' Systems Prescription; Dec. 1996.

Ukens, Carol; Drug Topics; Rx Description of Product Label Aids Accuracy.

McHugh, James A.; Phillips, Alexander J.; Computers in Healthcare; Managed-Care Pharmacy: An Integrated MIS Approach.

JICST; Development of a Printing System of Drug Envelope Labels with Personal Computer and Experience of Its Usage.

Journal of Public Policy & Marketing; Comprehension Testing for OTC Drug Labels; Goals, Methods, Target Population, and Testing Environment.

Kalsher, Michael J.; Proceedings of the Human Factors and Ergonomics Society; Enhancing the Perceived Readability of Pharmaceutical Container Labels and Warnings: the Use of Alternative Designs and Pictorials.

Fluid Phase Equilibria; Pharmaceutical Container Labels: Enhancing Preference Perceptions with Alternative Designs and Pictorials.

Department of Clinical Pharmacy; A Survey of Prescription Label Preferences Among Community Pharmacy Patrons. American Journal of Hospital Pharmacy; Effect of Call-In Prescription Refill System on Workload in an Outpatient Pharmacy.

Department of Mathematical Statistics and Operation Research; Retail Pharmacy Activities and Their Automation by Bar Code Recorder, Tablet Counter and Remote Computer.

Bohsel Pharmacy Co. Ltd.; Computerized Prescription Checking System.

Business Forms, Labels & Systems; Label/Tag, Converting Magazine; A Prescription for Supplying the Pharmaceutical Industry.

Ursula Jones; How to Get More from your Label.

American Society of Consultant Pharmacist; White Paper on Automation in Pharmacy.

* cited by examiner

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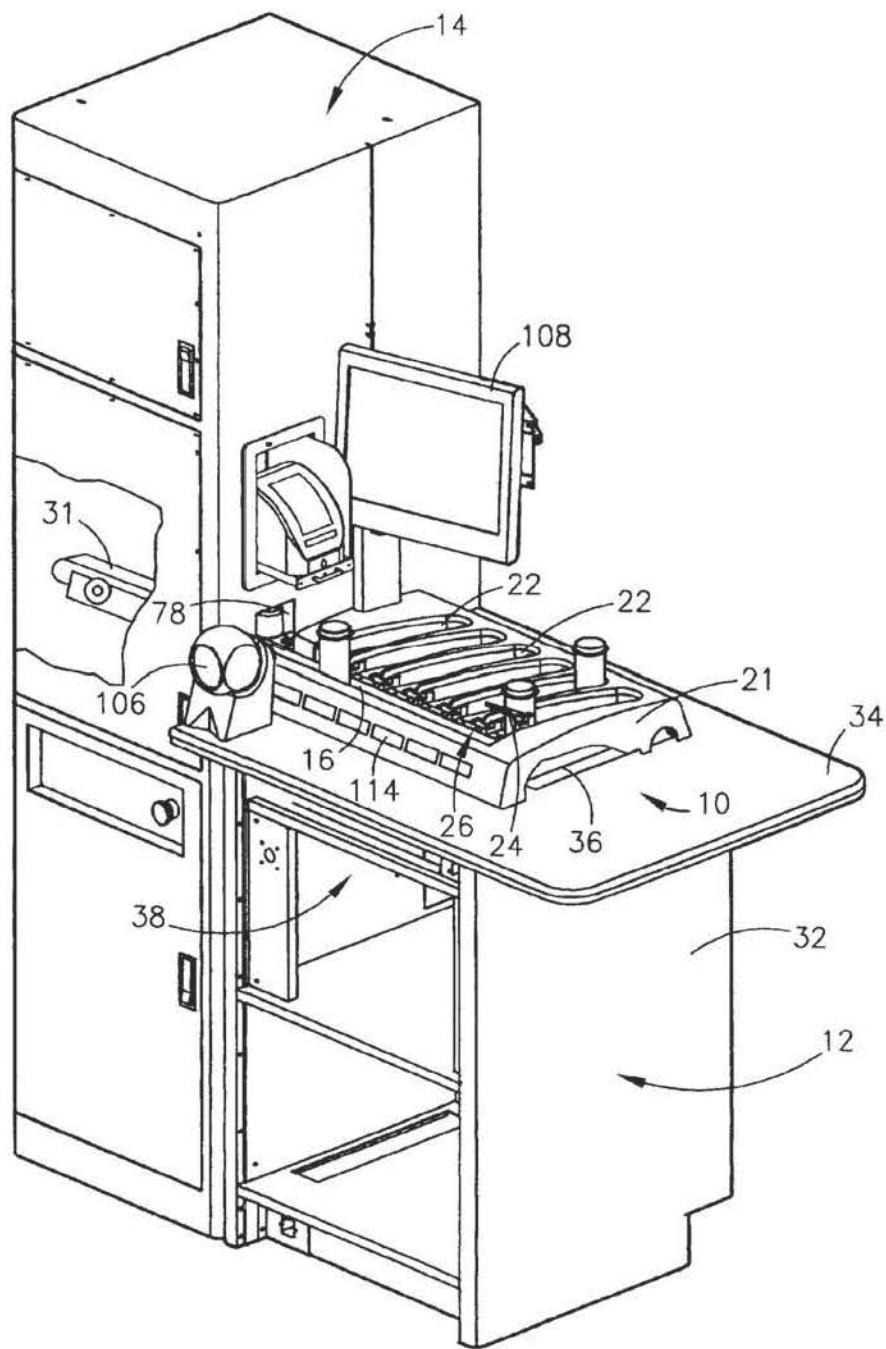


FIG. 1

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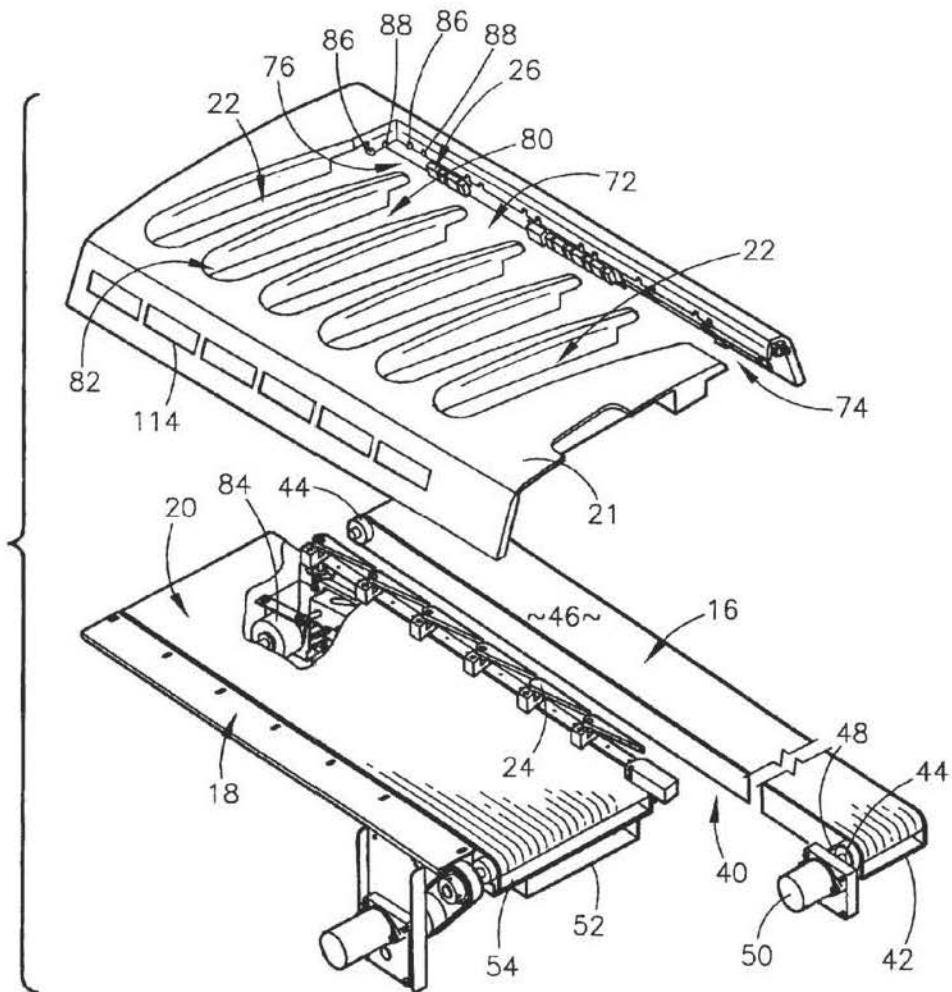


FIG. 2

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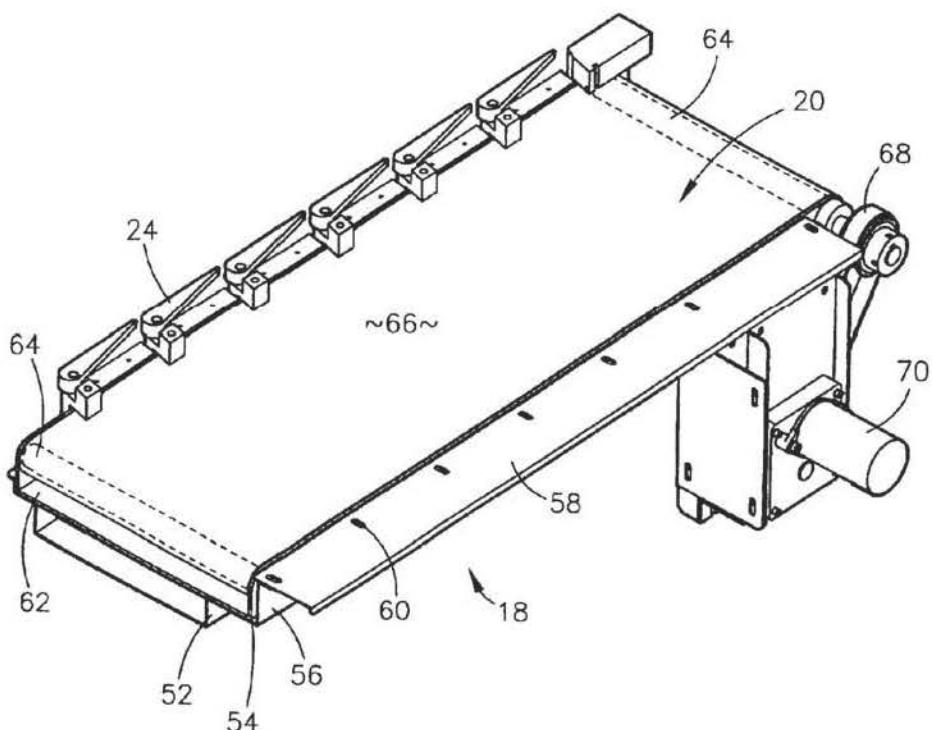


FIG. 3

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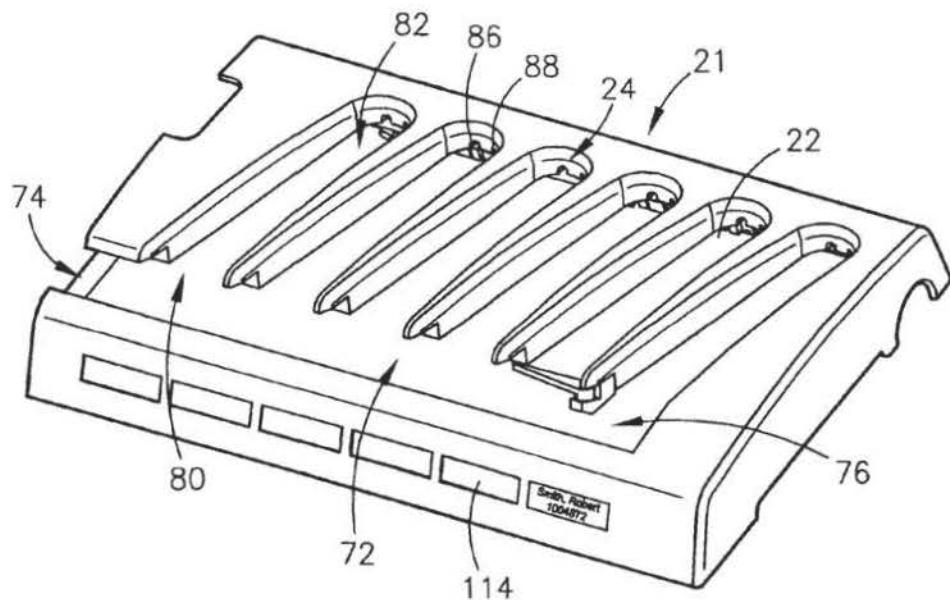


FIG. 4

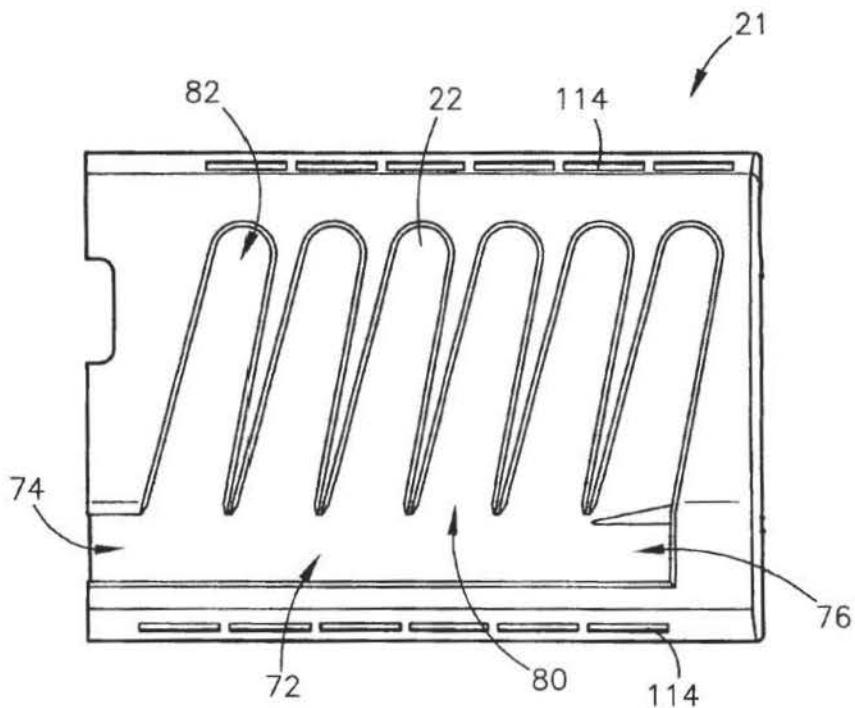


FIG. 5

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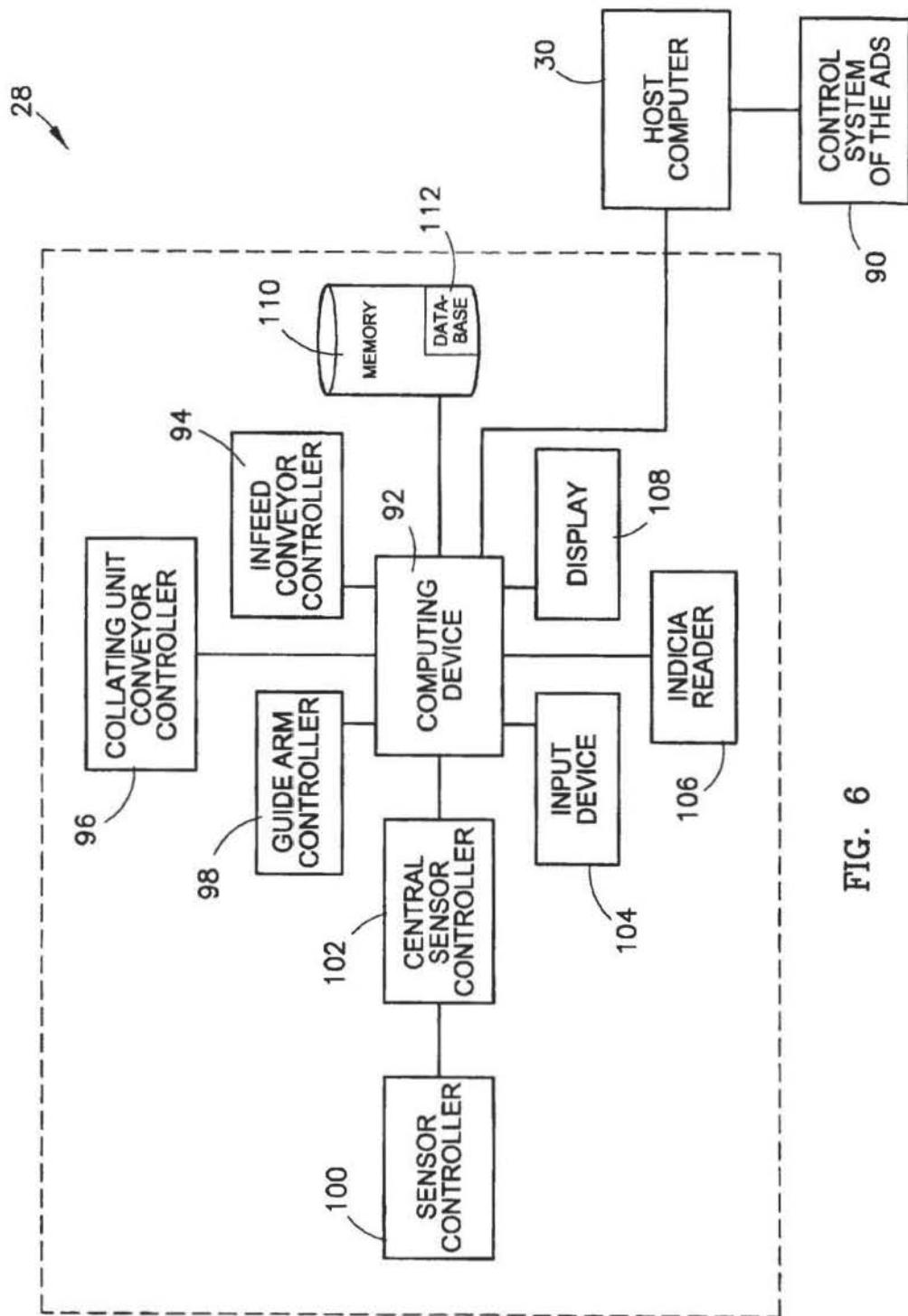


FIG. 6

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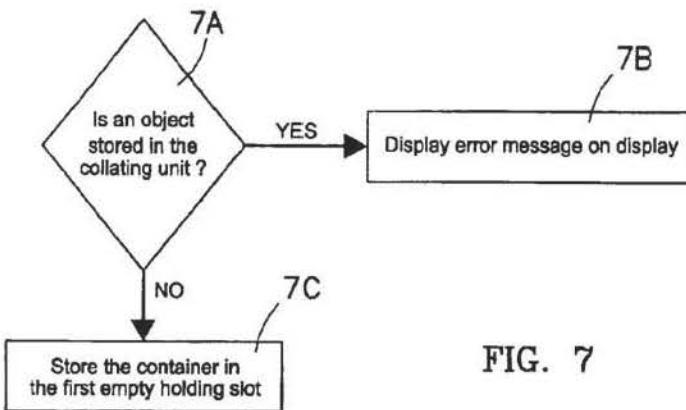


FIG. 7

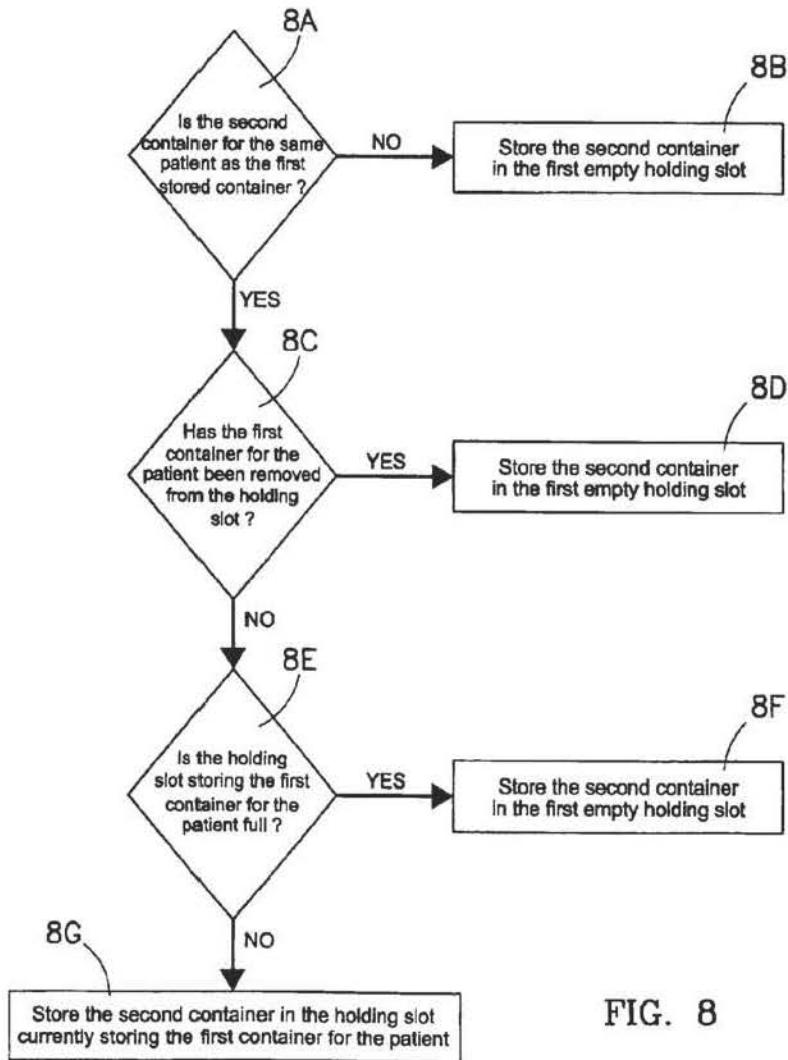


FIG. 8

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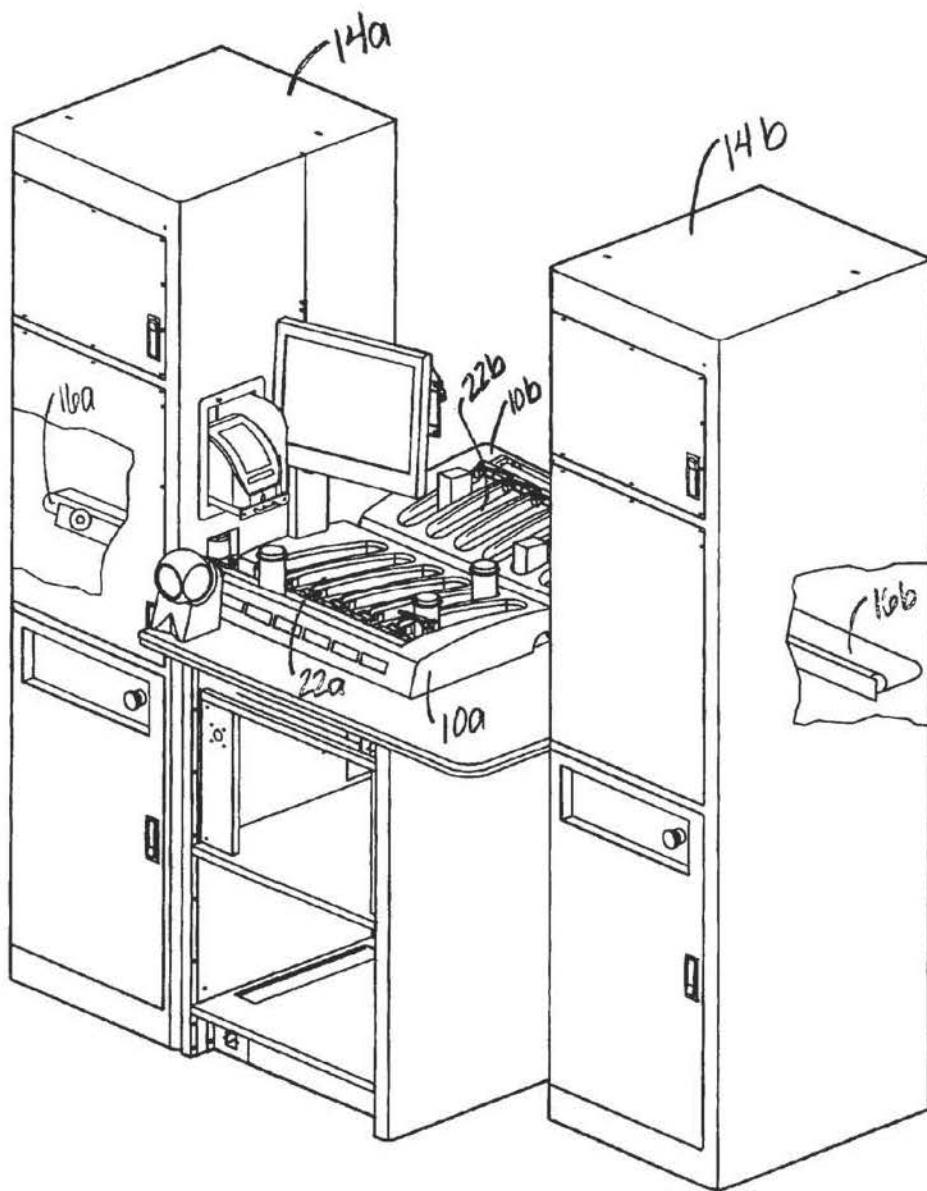


FIG. 9

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**COLLATING UNIT FOR USE WITH A
CONTROL CENTER COOPERATING WITH
AN AUTOMATIC PRESCRIPTION OR
PHARMACEUTICAL DISPENSING SYSTEM**

RELATED APPLICATION

This non-provisional utility application relates to and claims the priority benefit of U.S. provisional application entitled "COLLATING CONTROL CENTER," Ser. No. 60/394,589, filed Jul. 8, 2002, which is hereby incorporated into the present non-provisional application by reference.

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to automatic dispensing systems that are operable to automatically fill and label prescription vials or otherwise dispense pharmaceutical products to be labeled and dispensed as prescriptions to patients. More particularly, the invention relates to a collating unit operable to automatically store prescription containers dispensed from an automatic dispensing system for subsequent retrieval by an operator.

2. Description of the Prior Art

Automatic dispensing systems ("ADSs"), such as the one disclosed in U.S. Pat. No. 5,337,919, have been developed to assist pharmacists in the filling and dispensing of prescriptions. ADSs are extremely helpful in automatically filling prescription vials with medicaments or automatically dispensing unit-of-use packages containing medicaments. However, busy pharmacies often do not have enough pharmacists, technicians, or other operators available to retrieve and store the vials and packages, i.e. the prescription containers, as quickly as an ADS outputs the containers. It is therefore common for prescription containers to be lined up on an outfeed conveyor of the ADS, waiting for retrieval and storage by the operator. When the operator wishes to retrieve a particular patient's container, the operator must look at and read a label of each container on the outfeed conveyor until finding the correct container. This method of retrieving prescription containers is time-consuming and presents a possibility for error, since the operator may easily pick up the wrong container in search of the patient's container. If the patient has several filled prescriptions corresponding to several containers, the operator must look through even more containers for the patient's containers. Further, if the ADS is filling the containers faster than the operator can retrieve the containers, place caps on the containers that are filled prescription vials, and store the containers, then the operator may likely store the containers on a counter top in the pharmacy. This presents the possibility of containers becoming disorganized, or of even more concern, containers being knocked over. If the containers are filled prescription vials, then since the vials are not yet capped when they exit the ADS, then medicaments may spill from toppled vials onto the counter top or onto the floor. Further, there is the possibility other items may inadvertently be placed in the vials, such as other medicaments or particulates, such as dust accumulated on the counter top or floor.

If the pharmacy does provide multiple pharmacists, technicians, or other operators to retrieve and store the prescription containers exiting the ADS, one or more persons are necessarily moving around the outfeed conveyor of the ADS. Since the area around the conveyor is relatively small, these persons are likely to bump into each other or otherwise cause a disruptive work environment. Further,

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with multiple persons retrieving the containers, the containers may become misplaced, or the contents of filled prescription vials may be spilled. It is also possible that one or more of the containers dispensed for a given patient may be retrieved by one operator while other container(s) for the same patient may be retrieved by another operator. This may cause confusion, and when this happens, the patient may inadvertently leave the pharmacy without all of the required prescription containers. Requiring additional operators for managing retrieval and storage of the containers also increases the overall operating costs of the pharmacy.

Once the operator finds the correct container for the patient, the container is usually packaged in a bag having a label identifying the patient's name for whom the container is intended, a prescription number for the prescription associated with the container, and other relevant and identifying information for the prescription. If the patient requires multiple containers, all containers would normally be packaged in the same bag. A prescription label for each prescription stored in the bag is then normally stapled to the bag. The bag is then stored, normally in alphabetical order, in a bin or other storage receptacle. As bags for various patients are stored in the bin, the bags are bunched together, which often makes it difficult to find a bag for a particular patient. Further, if a bag is mistakenly placed in the bin out of alphabetical order, upon retrieval of the bag, the operator is required to conduct a more extensive search of the stored bags for the desired bag.

If the patient has several prescriptions corresponding to several filled containers, all the containers should be packaged in the same bag for retrieval by the operator. However, it is common for multiple prescription containers to be packaged in separate bags for a variety of reasons. For example, if prescriptions are entered into a control system of the ADS at separate times, as opposed to being entered at approximately the same time, then the containers containing the prescribed medicament will exit the ADS at separate intervals. The operator retrieving the containers from the ADS outfeed conveyor will then likely package the containers as they exit the ADS, as opposed to retrieving a container for a patient, recognizing that other containers will be forthcoming from the ADS, and temporarily setting the retrieved container aside to wait for the other containers for the patient to exit the ADS. When the last container for the patient has exited the ADS, the operator must then retrieve all containers for the patient that have been set aside, package the containers in a bag, and store the bag in alphabetical order in the storage bin. If the operator sets aside multiple containers for multiple patients, the counter top of the pharmacy is likely to become full with prescription containers awaiting packaging, which increases the possibility of misplacing a container or of even more concern, incorrectly packaging a container in the wrong bag.

To alleviate some of the problems associated with retrieving dispensed prescription containers, ADSs are often provided with a control center or other end unit, wherein prescription containers filled with medicaments are conveyed to the control center via the outfeed conveyor of the ADS. Most prior art control centers are static in that they are simply a cabinet or handling station at which the operator retrieves a filled container from the outfeed conveyor, places a cap on the container if it is a filled prescription vial, packages the container in a bag or other package, and stores the container in a storage receptacle or bin based on a patient's name.

Automated control centers have been developed which are operable to automatically store the containers exiting the

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ADS. Such automated control centers commonly include a storage unit having a plurality of holding slots, holding areas, or other storage mechanism in which the prescription containers are stored. Unfortunately, prior art automated control centers are limited to storing only one prescription container per a slot or compartment. Additionally, prior art automated control centers store the container based on a prescription number associated with the container, as opposed to storing the container based on a patient name for whom the container is intended. This is especially inconvenient for several reasons. First, many patients now receive more than one prescription at a time, and thus, more than one prescription container will be associated with each patient. Since prior art automated control centers are only operable to store one container per a slot, an operator retrieving stored containers for a patient must retrieve containers from several different slots. Further, because the slots in which the containers for the patient are stored are not necessarily next to each other, or even proximate to each other, the operator is required to look for containers at several various locations within the storage unit.

Second, prior art automated control centers are only operable to store the container for the patient under the prescription number, and thus, any indicator for the slot in which the container is stored only displays the prescription number. The operator is then required to cross-reference the prescription number to the patient name by either viewing the prescription number on paperwork for the prescription, viewing the prescription number on the indicator for the slot, and determining if the numbers match, or viewing the prescription number on a display, such as a computer monitor, and matching the prescription number to the number on the indicator. This is time-consuming and prone to error since the operator must match prescription numbers that are often several digits in length.

As noted above, many ADSs already include static control centers. To automate the static control centers, the static control centers must either be completely replaced with automated control centers having storage units for storing the prescription containers, or the static control centers must be substantially modified to include the storage units. Extensive modification or replacement of the static control centers is required because the storage units for storing the prescription containers are normally large and bulky and include many structural items not found in existing static control centers. Therefore, prior art static control centers cannot be easily and inexpensively modified to include storage units for storing prescription containers.

Another limitation of prior art automated control centers is that they are not configured to simultaneously store both unit-of-use packages containing medicaments and filled prescription vials. This is especially problematic because many medicaments are now pre-packaged in unit-of-use packages, especially in Europe.

Further yet, prior art automated control centers are often relatively expensive, due to their large size and numerous features.

There is therefore a need for an automated storage unit configured to be easily used with an existing static control center. More particularly, there is a need for a storage unit that automatically stores a prescription container containing medicaments and dispensed from an automatic dispensing system for subsequent retrieval by an operator. There is also a need for a unit operable to store more than one container in a holding area. Additionally, there is a need for a unit operable to collate multiple containers for a patient in one

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holding area. Further, there is a need for a unit operable to store a container for a patient based on the patient's name, as opposed to a prescription number associated with the container. Additionally, there is a need for a unit that is configured to simultaneously store both prescription vials and/or packages containing medicaments in a staging area such that multiple prescriptions for a patient, whether in the form of prescription vials, unit-of-use packages, or a combination thereof, are grouped together for easy retrieval. Even further, there is a need for a unit that is relatively inexpensive.

SUMMARY OF THE INVENTION

The present invention solves the above-described problems and provides a distinct advance in the art of automated storage units for use with static control centers cooperating with automatic dispensing systems ("ADSs"). More particularly, the present invention provides a collating unit that may be used with an existing static control center to automatically store prescription containers, such as prescription vials and unit-of-use packages containing medicaments, exiting an ADS. The unit stores prescription containers according to a storage algorithm that is dependent on a patient name for whom a container is intended and an availability of an open storage position in the collating unit.

The collating unit of the present invention broadly includes an infeed conveyor, a base, a collating unit conveyor, a frame, a plurality of holding areas, a plurality of guide arms, a plurality of sensors, and a control system. The collating unit may be mounted in an opening formed in a counter top of an existing control center or, alternatively, a control center may be manufactured with the collating unit.

The infeed conveyor is preferably positioned on the counter top of the control center and may be an outfeed conveyor of the ADS. The base is preferably mounted within the opening in the counter top and extends into the cavity of the control center. The base is secured to the counter top and provides a stable support structure on which the collating unit conveyor may be mounted. The collating unit conveyor is mounted on the base and is positioned generally adjacent to the infeed conveyor.

The frame substantially surrounds the infeed conveyor and the base and collating unit conveyor. The frame includes a longitudinal slot positioned along a length of the frame, such that when the frame is positioned over the infeed and collating unit conveyors, the longitudinal slot is positioned over the infeed conveyor. The frame also includes the plurality of holding areas formed therein. Each holding area is positioned generally transverse to the longitudinal slot at an angle less than 90° to the longitudinal slot. Each holding area is generally U-shaped to include an open end and a closed end. The open end of each area is interconnected with the longitudinal slot. When the frame is positioned over the infeed and collating unit conveyors, the holding areas are positioned over the collating unit conveyor.

The plurality of guide arms are rotatably mounted to the base between the infeed conveyor and the collating unit conveyor and at the open end of each holding area. The rotation of each arm is driven by an individual guide arm motor in communication with the control system.

The plurality of sensors are operable to determine the presence of a container within the collating unit. Each sensor includes an infrared light emitting diode ("LED") and receiver. Sensors are positioned at an end of the longitudinal slot, at the closed end of each holding area, and along a length of the longitudinal slot proximate to the open end of each holding area.

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The control system controls operation of the infeed conveyor, the collating unit conveyor, the plurality of guide arms, and the plurality of sensors. The control system includes a computing device, such as a computer, an infeed conveyor controller, a collating unit conveyor controller, a guide arm controller for each guide arm, a sensor controller for each sensor, a central sensor controller, an input device, an indicia reader, and at least one display, such as a computer monitor. The control system is preferably integrated with a control system of the ADS.

The infeed conveyor controller controls operation of the infeed conveyor and specifically, is operable to instruct movement of an infeed conveyor motor. Similarly, the collating unit conveyor controller controls operation of the collating unit conveyor and is operable to instruct movement of a collating unit conveyor motor.

Each guide arm controller controls operation of its guide arm and specifically, controls operation of its guide arm motor. When a container is ready to be stored in the holding area, the control system instructs the guide arm motor, via the guide arm controller, to open and close the guide arm.

Each sensor is controlled by its sensor controller, and each of the sensor controllers is controlled by the central sensor controller. Thus, the central sensor controller is operable to transmit information to and receive information from each of the sensor controllers.

The input device may be a keyboard, keypad, fingerprint reader, mouse, etc. An operator of the collating unit uses the input device to input identifying information for a patient, such as the patient's name, into the control system to facilitate locating stored containers in the collating unit.

The indicia reader is preferably a bar code reader for scanning a bar code of a prescription for the patient. Paper-work for the prescription preferably includes the bar code identifying the prescription.

The display is preferably a flat screen computer monitor mounted on an outer face of the ADS for easy viewing by the operator.

In operation, a prescription for a patient is entered into the control system of the ADS along with identifying information for the prescription, such as the patient's name. The ADS then dispenses a container containing the prescribed medicament. The container is transported to the control center, and specifically to the collating unit, via the infeed conveyor. The control system next determines in which holding area to store the container. The selected holding area is dependent on whether previous containers for the patient have been stored in the collating unit and not yet retrieved. If containers for the patient have already been stored and not yet retrieved, the control system determines if the holding area has space to store the additional container. To accomplish this, the sensor positioned at the open end of the holding area determines if the holding area is full. If the holding area is not full, the container is stored in the holding area. If the holding area is full, or if no container for the patient has been stored and not yet retrieved, the control system selects the first empty holding area for storage of the container.

To store the container in the holding area, the infeed conveyor moves forward to transport the container to the open end of the selected holding area. As the container progresses to the holding area, the guide arm for the area opens outwardly into the path of the container. Based on the speed of the infeed conveyor and the sensor sensing the presence of the container, the control system knows when the container is positioned at the opening of the holding area.

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Once the container is positioned at the opening of the holding area, the control system instructs the guide arm to close, which pushes the container into the holding area and onto the collating unit conveyor. To further transport the container to the closed end of the area, the control system instructs the collating unit conveyor to move forward. Since the holding area is positioned at an angle less than 90° to the longitudinal slot, the container is moved to the closed end of the holding area due to the forward progression of the collating unit conveyor.

When an operator of the collating unit desires to retrieve the container from the holding area, the operator may input the identifying information for the prescription, such as the patient's name, into the control system via the input device. Alternatively, the operator may scan the bar code on the paperwork of the prescription using the indicia reader. The control system then instructs an indicator positioned on either side of the frame proximate to the holding area to flash, which indicates the holding area location of the desired container.

By constructing a collating unit as described herein, numerous advantages are realized. For example, the collating unit of the present invention assists pharmacists or other operators in storing containers dispensed by an automatic dispensing system by automatically storing the containers, which significantly reduces the time necessary to manually retrieve and store the containers. Additionally, the collating unit eliminates errors associated with manual retrieval and storage of dispensed containers. Further, the collating unit eliminates the need for multiple pharmacists or operators to retrieve and store the containers, thus decreasing the operating costs of the pharmacy. Further yet, the collating unit is operable to store more than one prescription container per a holding area.

The collating unit is also operable to associate a stored container with a patient based on the patient's name. Further, the collating unit of the present invention can collate and store multiple containers for a patient within the same area. Further yet, the collating unit may be used with an existing control center and is relatively inexpensive, thus providing a pharmacy with an inexpensive, easy-to-install solution for collating and storing prescription containers, including prescription vials and unit-of-use packages, dispensed from an automatic dispensing system.

These and other important aspects of the present invention are described more fully in the detailed description below.

BRIEF DESCRIPTION OF THE DRAWING FIGURES

A preferred embodiment of the present invention is described in detail below with reference to the attached drawing figures, wherein:

FIG. 1 is an isometric view of a collating unit constructed in accordance with a first preferred embodiment of the present invention and shown mounted on a control center cooperating with an automatic dispensing system ("ADS");

FIG. 2 is an exploded view of the collating unit, specifically illustrating an infeed conveyor, a collating unit conveyor, and a frame;

FIG. 3 is an isometric view of a base of the collating unit having the collating unit conveyor and a plurality of guide arms mounted thereon;

FIG. 4 is an isometric view of the frame of the collating unit, particularly illustrating a plurality of holding areas;

FIG. 5 is a plan view of the frame;

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FIG. 6 is a schematic of the components of a control system of the collating unit;

FIG. 7 is a flow diagram illustrating steps performed by the collating unit for storage of a prescription container;

FIG. 8 is a flow diagram illustrating steps performed by the collating unit when storing multiple prescription containers for a patient; and

FIG. 9 is an isometric view of two collating units constructed in accordance with a second preferred embodiment of the present invention, wherein prescription containers are routed on two infeed conveyors to the two collating units.

The drawing figures do not limit the present invention to the specific embodiments disclosed and described herein. The drawings are not necessarily to scale, emphasis instead being placed upon clearly illustrating the principles of the invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Turning now to the drawing figures, and particularly FIGS. 1, 2, and 6 a collating unit 10 constructed in accordance with a first preferred embodiment of the invention is illustrated. The collating unit 10 is provided for use with a control center 12 cooperating with an automatic dispensing system ("ADS") 14. The collating unit 10 is operable to automatically store filled prescription containers, such as prescription vials and unit-of-use packages containing medicaments, exiting the ADS 14 based on an organization scheme that accounts for identifying information of the container, such as a patient name for whom the container is intended or a prescription number of the container.

The collating unit 10 broadly comprises an infeed conveyor 16 for transporting the prescription containers from the ADS 14 to the collating unit 10; a base 18 housed within the control center 12 and positioned generally adjacent to the infeed conveyor 16; a collating unit conveyor 20 mounted on the base 18; a frame 21 substantially surrounding and covering the infeed conveyor 16 and the base 18; a plurality of holding areas 22 formed within the frame 21; a plurality of guide arms 24 mounted on the base 18 between the infeed conveyor 16 and the collating unit conveyor 20 and operable to maneuver the containers from the infeed conveyor 16 into the plurality of holding areas 22; a plurality of sensors 26 to sense the presence of the containers within the collating unit 10; and a control system 28 for controlling operation of the infeed conveyor 16, the collating unit conveyor 20, the guide arms 24, and the sensors 26.

As noted above, the present invention cooperates with the ADS 14, such as, for example, the SP 200 Robotic Prescription Dispensing System or the SP Unit Dispenser, both manufactured and sold by ScriptPro LLC of Mission, Kans. Various aspects of ADSs are embodied in U.S. Pat. Nos. 5,337,919, 5,713,487, and 5,762,235, and U.S. patent application Ser. No. 09/457,286, all of which are hereby incorporated by reference. Briefly, the ADS 14 receives prescriptions ("scripts") via a host computer. The scripts are then automatically filled, either by automatically filling a prescription vial or automatically dispensing a unit-of-use package containing medicaments. The filled vials or packages, i.e. the containers, are transported, via an outfeed conveyor 31, to the control center 12, where an operator retrieves the containers from the outfeed conveyor 31, places caps on the containers that are prescription vials, and stores the containers in a predetermined storage unit or packages the containers for receipt directly by customers. The control center 12 is commonly a cabinet, table, or other housing structure 32

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that houses caps for the vials, a printer, a scanner, a keyboard drawer, and other necessary supplies. A counter top 34 encloses a top of the cabinet 32 and provides a surface on which the outfeed conveyor 31 may be positioned. The control center 12 is thus a workstation from which a pharmacist, technician, or other operator may retrieve the containers from the outfeed conveyor 31 and manually store them in the predetermined storage unit.

The present invention may be positioned on the counter top 34 of the control center 12 and housed partially inside the cabinet 32 of the control center 12. To prepare the existing control center 12 for receipt of the collating unit 10 of the present invention, an opening 36 must be formed or cut in the counter top 34. The opening 36 allows access to a inside cavity 38 of the control center 12, where the printer, scanner, and other supplies are housed. Alternatively, a new counter top (not shown) for the control center 12 may be provided already having the opening 36 formed therein. Thus, the collating unit 10 of the present invention provides an automatic container storage unit that may be used with existing control centers 12. The collating unit 10 automatically stores containers exiting the ADS 14 by patient, prescription, or other predetermined storage scheme without input or handling by the operator.

The infeed conveyor 16 is preferably positioned on the counter top 34 of the control center 12 and extends from the ADS 14. In preferable form, the infeed conveyor 16 is also the outfeed conveyor 31 of the ADS 14, such that the outfeed conveyor 31 extends onto the counter top 34 of the control center 12. Alternatively, the infeed conveyor 16 may be positioned substantially adjacent to an end of the outfeed conveyor 31 of the ADS 14, such that containers being transported on the outfeed conveyor 31 continuously move onto the infeed conveyor 16 without interruption and without toppling or otherwise displacing the containers. Preferably, the infeed conveyor 16 extends a length of the collating unit 10 to transport containers to various locations in the collating unit 10.

As illustrated in FIG. 2, the infeed conveyor 16 includes a conveyor base 40 having a horizontal base section 42 preferably formed of metal. A pair of spaced-apart, transversely-extending rollers 44 are rotatably mounted to the conveyor base 40. A conveyor belt 46 is trained over the rollers 44 so that the belt 46 covers and rides over the horizontal base section 42. The rightmost roller 44, as viewed in FIG. 2, serves as a drive roller that is driven by a belt or chain 48 rotated by an infeed conveyor motor 50. The infeed conveyor motor 50 is in communication with the control system 28, as described in more detail below.

Turning to FIGS. 1, 2, and 3, the base 18 is positioned within the opening 36 in the counter top 34 and partially housed within the cavity 38 of the cabinet 32 of the control center 12. The base 18 is substantially rectangular in horizontal cross-section and extends the length of the collating unit 10, such that the base 18 is positioned generally adjacent to the infeed conveyor 16. The base 18 includes first and second supporting members 52, 54 for supporting the collating unit 10, as illustrated in FIG. 3. The first supporting member 52 is preferably substantially rectangular in vertical cross-section and provides a support structure on which the second supporting member 54 is positioned. The second supporting member 54 is generally U-shaped in vertical cross-section. The shape of the second supporting member 54 forms a wide, hollow trough, the purpose of which will be described below. A leg 56 of the second supporting member 54 is provided with a securing plate 58 fitted at a general 90° angle to the leg 56. The securing plate 58

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includes a plurality of holes 60 through which screws, bolts, or other securing fasteners may be guided to secure the base 18 to the counter top 34 of the control center 12. As such, the base 18 fits primarily within the cavity 38 of the control center 12, except for the securing plate 58, which lies flat against and is secured to the counter top 34. The base 18 is preferably formed of metal or other suitable material capable of providing a stable support structure for the collating unit 10.

The collating unit conveyor 20 is mounted within the hollow trough of the second supporting member 54 of the base 18, such that a top of the collating unit conveyor 20 is generally even with a top of the infeed conveyor 16. The collating unit conveyor 20 is generally similar to the infeed conveyor 16 in that the collating unit conveyor 20 includes a horizontal base section 62, a pair of spaced-apart, transversely-extending rollers 64 rotatably mounted to the horizontal base section 62, and a conveyor belt 66 trained over the rollers 64 so that the belt 66 covers and rides over the horizontal base section 62. The rightmost roller 64, as viewed in FIG. 3, serves as a drive roller that is driven by a belt 68 or chain rotated by a collating unit conveyor motor 70. The collating unit conveyor motor 70 is positioned within the cavity 38 of the control center 12 and is in communication with the control system 28, as described in more detail below.

Turning now to FIGS. 4 and 5, the frame 21 preferably substantially surrounds the infeed conveyor 16 and the base 18 and collating unit conveyor 20 and abuts up against the ADS 14, as best illustrated in FIG. 1. The frame 21 may be secured to the infeed conveyor 16 and base 18 or may be sized to simply fit over the infeed conveyor 16 and base 18. The frame 21 includes a longitudinal slot 72 generally extending a length of the frame 21. When the frame 21 is positioned over the infeed conveyor 16 and base 18, the longitudinal slot 72 is substantially positioned over the infeed conveyor 16. The longitudinal slot 72 preferably includes an open end 74 and a closed end 76, and the open end 74 preferably abuts up against an opening in the ADS 14 through which the containers are transported, as illustrated in FIG. 1. Thus, as the containers are transported on the infeed conveyor 16, the containers are also guided within the longitudinal slot 72 of the frame 21. The frame 21 is preferably formed of plastic or other lightweight material, such as aluminum.

As with the longitudinal slot 72, the plurality of holding areas 22 are preferably formed in the frame 21. Each holding area 22 is generally U-shaped, and each area 22 is interconnected with the longitudinal slot 72, as best illustrated in FIGS. 4 and 5. Each area 22 preferably includes an open end 80 and a closed end 82, and the open end 80 of each area 22 is preferably positioned adjacent to the longitudinal slot 72. When the frame 21 is positioned over the infeed conveyor 16 and the base 18, the holding areas 22 are substantially positioned over the collating unit conveyor 20 mounted on the base 18, as illustrated in FIG. 2. In preferable form, the frame 21 includes six holding areas 22 generally arranged parallel to each other, although fewer or more areas 22 are possible depending on the size of the frame 21. Importantly, the holding areas 22 are preferably formed at an angle less than 90° to the longitudinal slot 72, as opposed to the holding areas 22 being formed substantially perpendicular to the longitudinal slot 72, the purpose of which will be described below. The holding areas 22 are also advantageously sized to accommodate both prescription vials and unit-of-use packages containing medicaments, such that the collating unit 10 may store both vials and packages simultaneously in the holding areas 22.

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The plurality of guide arms 24 are rotatably mounted on the base 18 between the infeed conveyor 16 and the collating unit conveyor 20, as illustrated in FIG. 2. Each guide arm 24 is mounted at the open end 80 of each holding area 22, such that each guide arm 24 separates each holding area 22 from the longitudinal slot 72, as illustrated in FIGS. 1, 4, and 5. Thus, the collating unit 10 preferably has one guide arm 24 for each holding area 22 for a total of six guide arms 24.

The rotation of each guide arm 24 is driven by an individual guide arm motor 84, such that each guide arm 24 is operable to rotate outwardly into the longitudinal slot 72. Each guide arm motor 84 is in communication with the control system 28, as described in more detail below. As a container exits the ADS 14 and travels on the infeed conveyor 16 through the longitudinal slot 72, the control system 28 determines in which holding area 22 to store the container, as described in more detail below. The guide arm 24 for the selected holding area 22 opens via the guide arm motor 84, such that the container is guided within the holding area 22. As the guide arm 24 closes, the container is substantially moved within the holding area 22, as also described in more detail below.

The plurality of sensors 26 sense the presence or location of containers stored in the collating unit 10, as described in more detail below. Each sensor 26 preferably includes at least one infrared light emitting diode ("LED") 86 and at least one receiver 88, such that infrared energy emitted by the LED 86 is received by the receiver 88, as illustrated in FIG. 4. If an object, such as a container, is located in a path of the energy emitted from the LED 86, then the energy will reflect off of the object and be received by the receiver 88, thus indicating the presence of the object. In contrast, if no object is in the path of the emitted energy, then the energy has no object off of which to reflect or alternatively, the reflecting energy is measurably reduced. Therefore, little or no energy is received by the receiver 88, which indicates that no object is within the path of the energy emitted by the LED 86.

Sensors 26 are positioned at the closed end 76 of the longitudinal slot 72, at the closed end 82 of each holding area 22, and along the length of the longitudinal slot 72 proximate to the open end 80 of each holding area 22, as illustrated in FIGS. 2 and 4. Although infrared LEDs 86 and receivers 88 are described, the sensors 26 may include any conventional optical-type sensor having an optical emitter and an optical detector. The use and operation of the sensors 26 will be described in more detail below with respect to the operation of the collating unit 10.

Turning now to FIGS. 6, 7, and 8, the control system 28 of the present invention controls operation of the collating unit 10 and is integrated with a control system 90 of the ADS 14. The control system 90 of the ADS 14 receives data corresponding to prescriptions inputted to the host computer 30. The host computer 30 may be any pharmacy computer running a pharmacy automation program such as provided by Zadall Computer Systems. With respect to the collating unit 10 of the present invention, the control system 28 communicates with and controls operation of the infeed conveyor 16, the collating unit conveyor 20, the plurality of guide arms 24, and the plurality of sensors 26.

The control system 28 broadly includes a computing device 92, such as a computer, an infeed conveyor controller 94, a collating unit conveyor controller 96, a guide arm controller 98 for each guide arm 24, a sensor controller 100 for each sensor 26, a central sensor controller 102 for controlling operation of each of the individual sensor con-

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trollers 100, an input device 104, such as a keyboard, keypad, fingerprint reader, mouse, etc., an indicia reader 106, such as a bar code reader, and at least one display 108, such as a computer monitor, that serves as an operator interface.

The computing device 92 may broadly comprise any processor capable of being programmed and preferably also includes a memory 110 on which at least one database 112 may be stored. The computing device 92 communicates with and controls operation of the other components of the control system 28.

The infeed conveyor controller 94 controls operation of the infeed conveyor 16. Specifically, the infeed conveyor controller 94 is in communication with the infeed conveyor motor 50 and is operable to instruct movement of the motor 50. The infeed conveyor controller 94 receives instructions from the control system 28 on when to begin and end movement of the infeed conveyor 16.

The collating unit conveyor controller 96 controls operation of the collating unit conveyor 20. As with the infeed conveyor controller 94, the collating unit conveyor controller 96 communicates with the collating unit conveyor motor 70 and receives instructions from the control system 28 on when to begin and end movement of the collating unit conveyor 20.

Each guide arm controller 98 controls operation of its guide arm 24. Specifically, each guide arm controller 98 controls operation of its guide arm motor 84 and thus, is in communication with its guide arm motor 84. Each guide arm controller 98 receives instructions from the control system 28 on when to open and close its guide arm 24, as described in more detail below.

Each sensor controller 100 controls operation of its sensor 26, and, as noted above, the central sensor controller 102 controls operation of each sensor controller 102. Thus, the central sensor controller 102 is operable to transmit information to and receive information from each sensor controller 100. At predetermined intervals, the sensors 26 determine the presence of any stored containers within the collating unit 10, as described below, and information on any sensed containers is transmitted to the control system 28 via the central sensor controller 102.

Initially, a script is entered into the control system 90 of the ADS 14 by a pharmacist, technician, or other operator. When entering the script, the operator preferably also enters identifying information for the script, such as a patient's name. Additionally, the script is assigned a script number, wherein the script number identifies the particular patient name and medicament to be dispensed. Further, a unique bar code is associated with the script, and the bar code is preferably placed on any paperwork for the script, the purpose of which will be described below.

Once the script is entered into the control system 28, the ADS 14 automatically dispenses a first initial container, wherein the container is either a prepackaged unit-of-use prescription package or a vial filled with the prescribed medicament. The ADS 14 then labels the container with the identifying information and bar code for the script and conveys the container to the collating unit 10 via the outfeed conveyor 31, as described above. The control system 90 of the ADS 14 sends the script information to the control system 28 of the collating unit 10, including the patient's name and the script number.

Before storing the first container in the collating unit 10, the sensors 26 of the collating unit 10 determine if any object is stored or otherwise located in the collating unit 10, as

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depicted in Box 7A of FIG. 7. Thus, the sensor 26 positioned at the closed end 76 of the longitudinal slot 72 determines if any object is located on the infeed conveyor 16, and the sensors 26 positioned at the closed and open ends 80,82 of each holding area 22 determine if any object is located in any of the holding areas 22. If the sensors 26 determine that an object is located in the collating unit 10, such information is transmitted to the control system 28 via the central sensor controller 102, and the control system 28 instructs an error message to be displayed on the display 108, as depicted in Box 7B. If the sensors 26 determine that no object is located in the collating unit 10, the control system 28 instructs the first container exiting the ADS 14 to be stored in the collating unit 10, as depicted in Box 7C. Thus, the sensors 26 can determine if a prescription container from a previous use has not been removed from the collating unit 10 or if a foreign object has been placed in the collating unit 10.

When the collating unit 10 is initially empty, the control system 28 instructs the first container exiting the ADS 14 be stored in the first available holding area 22, i.e. the holding area 22 nearest to the ADS 14. To store the container in the holding area 22, the control system 28 instructs the infeed conveyor 16 to move forward, and the guide arm 24 for the selected holding area 22 to open. Once the guide arm 24 opens into the longitudinal slot 72 and into the path of the container, the container is prevented from being transported by the infeed conveyor 16 and is held in place in the longitudinal slot 72 by the guide arm 24. The sensor 26 positioned at the open end 80 of the holding area 22 is then instructed to confirm that the container is located at the open end 80 of the holding area 22. If the sensor 26 at the open end 80 does confirm the presence of the container, the control system 28 instructs the guide arm 24 for the area 22 to close, which consequently moves the container off of the infeed conveyor 16 and into the holding area 22 and onto the collating unit conveyor 20. Once the guide arm 24 closes, the control system 28 instructs the collating unit conveyor 20 to move forward. Since the holding area 22 is formed at an angle within the frame 21, as discussed above, forward movement of the collating unit conveyor 20 moves the container proximate to the closed end 82 of the holding area 22. This allows room for other containers to be stored in the area 22 without disrupting or otherwise toppling the currently stored container.

As containers are stored in the collating unit 10, the control system 28 of the collating unit 10 stores such information in the memory 110. An operator of the collating unit 10 may at any time determine which containers are currently stored in the collating unit 10 and the location of the containers in the collating unit 10. Further, the control system 28 stores the identifying information for each stored container in the memory 110.

After the control system 28 instructs the first container to be stored in the holding area 22, the control system 28 instructs an indicator 114 proximate to the area 22 to display the identifying information for the container, such as the patient name and script number, as illustrated in FIG. 4. The indicator is preferably a vacuum fluorescent display and multiple indicators 114 are preferably secured to opposing sides of the frame 21. The indicator 114 for each holding area 22 is preferably lit once a container is stored in the holding area 22.

To store a second container in the collating unit 10, the control system 28 first determines if the second container is for the same patient as the first container, as depicted in Box 8A of FIG. 8. If the second container is not for the same patient as the first container, the control system 28 will not

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store the second container in the same holding area 22 in which the first container was stored, since the control system 28 will not store containers for different patients in the same holding area 22. Thus, the control system 28 instructs the second container to be stored in the first empty holding area 22, as depicted in Box 8B.

If the second container is for the same patient as the first container, the control system 28 determines if the first container for the patient has been retrieved or otherwise removed from the holding area 22, as depicted in Box 8C. The control system 28 determines if the first container has been removed from the holding area 22 by instructing the sensors 26 for the holding area 22 to determine if an object is located in the area 22. Such information is transmitted to the control system 28 via the sensor controller 100 for the holding area 22 and the central sensor controller 102. If the holding area 22 is empty, and thus, the first container has been removed, the control system 28 instructs the second container to be stored in the first empty holding area 22, as depicted in Box 8D.

If the first container for the patient has not been removed from the holding area 22, the control system 28 determines if the holding area 22 storing the first container is full, as depicted in Box 8E. In this example, since only one container has been stored in the collating unit 10, namely the first container, the holding area 22 that is holding the first stored container will not be full. However, in operation, several containers may be stored in the collating unit 10, and thus, it is possible the holding area 22 may be full. To determine if the holding area 22 is full, the sensor 26 positioned proximate to the open end 80 of the holding area 22 along the longitudinal slot 72 determines if any container is located proximate to the open end 80 of the holding area 22 and thus, if the holding area 22 is full. Since any previously stored container will be transported along the length of the holding area 22 due to the movement of the collating unit conveyor 20, as discussed above, then if the sensor 26 positioned proximate to the open end 80 of the holding area 22 senses any container, the control system 28 knows the holding area 22 is full.

If the holding area 22 already storing containers for the patient is full, the control system 28 instructs the second container for the patient to be placed in the first empty holding area 22, as depicted in Box 8F. If the holding area 22 is not full, the control system 28 instructs the second container for the patient to be placed in the holding area 22 currently storing the first container for the patient, as depicted in Box 8G.

The above process is repeated for each container exiting the ADS 14. As noted above, as containers are stored in the collating unit 10, the control system 28 tracks in which holding area 22 the container is stored and the patient for whom the container is intended. The control system 28 displays such information on the display 108 so that an operator of the collating unit 10 can quickly and easily determine the location of any container. When the operator desires to retrieve a container for a patient, the operator may locate the correct holding area 22 storing the prescription containers for the patient by any one of the following methods:

(1) find the correct holding area 22 storing the container for the patient from the information displayed on the indicator 114 associated with the holding area 22;

(2) highlight the script on a display (not shown) of the ADS 14 using either an input device (not shown) or an indicia reader (not shown) of the ADS' control system 90; or

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(3) highlight the script on the display 108 of the collating unit's control system 28 using either the input device 104 or the indicia reader 106.

Locating the holding area 22 by reading each indicator 114 may be time-consuming and error-prone. Therefore, the present invention allows the operator to highlight the locating information either using the input device 104 or the indicia reader 106 and either on the ADS' display (now shown) or the collating unit's display 108. The display 108 is preferably a flat-screen computer monitor mounted on an outer face of the ADS 14, as illustrated in FIG. 1. The method of the second and third options above are substantially similar, and therefore, only the third option will be described below.

To retrieve a container using a patient's name, for example, the operator may input the patient's name into the control system 28 by either typing the name using the keyboard, highlighting the name on the display 108 using the mouse, touching the name on the display 108 if the control system 28 includes touch-screen software, or any other suitable method. Preferably, the indicator 114 for the holding area 22 will flash, indicating the holding area 22 contains the identified container for the script. Alternatively, the operator may scan the bar code for the paperwork for the script using the indicia reader 106, which also triggers flashing of the indicator 114.

Upon retrieval or removal of the container from the holding area 22, the control system 28 closes the script to indicate the container for the patient has been retrieved. If the patient has more than one container, the control system 28 does not close the script until all containers for the patient have been retrieved from the collating unit 10. As a security feature, after retrieval of the containers from the holding area 22, the sensors 26 associated with the holding area 22, i.e. the sensors 26 positioned at the open and closed ends 80, 82 of the holding area 22, determine if any container is located in the area 22. If a container is located in the holding area 22, the control system 28 instructs an error message to be displayed on the display 108. This alerts a busy operator that not all containers for the patient were retrieved. Upon removal of all containers from the holding area 22, the control system 28 registers the holding area 22 as empty and operable to store additional containers.

In a second preferred embodiment, an ADS 14a is operable to dispense both prescription vials and unit-of-use packages to multiple collating units, hereinafter referred to as first and second collating units 10a, 10b, via multiple infeed conveyors, hereinafter referred to as first and second infeed conveyors 16a, 16b, as illustrated in FIG. 9. The collating units 10a, 10b of the second preferred embodiment are substantially similar to the collating unit 10 of the first preferred embodiment. Similarly, the infeed conveyors 16a, 16b of the second preferred embodiment are substantially similar to the infeed conveyor 16 of the first preferred embodiment.

As illustrated in FIG. 9, the first infeed conveyor 16a may be operable to transport prescription vials to the first collating unit 10a, and the second infeed conveyor 16b may be operable to transport prescription unit-of-use packages to the second collating unit 10b. The first and second collating units 10a, 10b may be positioned such that the holding areas 22a, 22b, substantially similar to the holding area 22 of the first preferred embodiment, are generally head-to-head, although other arrangements are possible. Thus, the prescription vials for the patient may be routed to the holding area 22a within the first collating unit 10a, and the prescrip-

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tion packages for the patient may be routed to the holding area **22b** within the second collating unit **10b**, wherein the holding areas **22a,22b** are adjacent or generally proximate to each other. The prescription containers for the patient are then generally grouped together for easy retrieval by the operator. More than two collating units **10a, 10b** may be required for a busy pharmacy.

Alternatively, the first and second infeed conveyors **16a, 16b** may transport the prescription containers and packages to one collating unit **10** (not shown in FIG. 9) substantially similar to the collating unit **10** of the first preferred embodiment, and the prescription vials and packages for each patient may be routed to the same holding area **22**.

The second preferred embodiment may be used with the ADS **14a**, which is operable to dispense both prescription vials and prescription unit-of-use packages, as illustrated in FIG. 9. The ADS **14a** preferably includes two separate dispensing machines with the collating units **10a, 10b** positioned therebetween. For example, the leftmost dispensing machine is operable to dispense prescription vials via the first infeed conveyor **16a** to the first collating unit **10a**, and the rightmost dispensing machine is operable to dispense prescription packages via the second infeed conveyor **16b** to the second collating unit **10b**. Alternatively, the ADS **14a** could be one single dispensing machine operable to dispense both prescription vials and packages and thus include multiple infeed conveyors **16a, 16b** mounted within the dispensing machine (not shown in FIG. 9) and operable to feed to at least one collating unit **10**.

Although the invention has been described with reference to the preferred embodiment illustrated in the attached drawing figures, it is noted that equivalents may be employed and substitutions made herein without departing from the scope of the invention as recited in the claims. For example, a prescription container dimension sensor may be used with the collating unit **10** as a security feature to ensure that the container being stored in the collating unit **10** is the same container the control system **90** of the ADS **14** is expecting to be stored in the collating unit **10**. This prevents foreign objects placed in the collating unit **10** during the storing process mistakenly being recognized as a container exiting the ADS **14**. The container dimension sensor may be operable to recognize that the dimensions of the container to be stored do not match the expected dimensions provided by the control system **90** of the ADS **14**. Additionally, the collating unit **10** may include holding areas **22** of varying dimensions for holding containers of varying dimensions.

Further, prior art control centers may be manufactured with the collating unit **10**, as opposed to the above-described incorporation of the collating unit **10** with the existing control center **12**. Additionally, sensors **26** may be positioned on each guide arm **24** to further sense if a container is contacting the guide arm **24**.

Having thus described the preferred embodiment of the invention, what is claimed as new and desired to be protected by Letters Patent includes the following:

1. A collating unit for automatically storing prescription containers dispensed by an automatic dispensing system, the collating unit comprising:

a storage unit for storing the containers delivered by an infeed conveyor;

a plurality of holding areas formed within the storage unit for holding the containers;

a plurality of guide arms mounted within the storage unit and operable to maneuver the containers from the infeed conveyor into the plurality of holding areas; and

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a control system for controlling operation of the infeed conveyor and the plurality of guide arms.

2. The collating unit as claimed in claim 1, the storage unit including—

5 a base positioned generally adjacent to the infeed conveyor; a collating unit conveyor mounted on the base; and a frame substantially surrounding and covering the infeed conveyor and the collating unit conveyor.

10 3. The collating unit as claimed in claim 2, wherein the infeed conveyor is an outfeed conveyor of the automatic dispensing system.

4. The collating unit as claimed in claim 3, wherein the frame includes a longitudinal slot extending a length of the collating unit and formed within the frame such that when the frame is positioned over the infeed and collating unit conveyors, the longitudinal slot is generally positioned over the infeed conveyor.

5. The collating unit as claimed in claim 4, wherein the holding areas are formed within the frame of the storage unit, such that when the frame is positioned over the infeed and collating unit conveyors, the holding areas formed within the frame are generally positioned over the collating unit conveyor.

20 6. The collating unit as claimed in claim 5, wherein each holding area includes an open end and a closed end, and the open end of each area is interconnected with the longitudinal slot, such that each holding area is formed in the frame at an angle less than 90° with respect to the longitudinal slot.

30 7. The collating unit as claimed in claim 1, further including a plurality of sensors mounted in the storage unit for sensing the presence of containers stored in the collating unit.

35 8. A collating unit for automatically storing prescription containers dispensed by an automatic dispensing system, the collating unit comprising:

an infeed conveyor for transporting the containers from the automatic dispensing system to the collating unit; a collating unit conveyor positioned generally adjacent to the infeed conveyor;

a frame substantially surrounding and covering the infeed conveyor and the collating unit conveyor;

a plurality of holding areas formed within the frame for holding the containers;

40 a plurality of guide arms mounted between the infeed conveyor and the collating unit conveyor and operable to maneuver the containers from the infeed conveyor into the plurality of holding areas; and a control system for controlling operation of the infeed conveyor, the collating unit conveyor, and the plurality of guide arms.

45 9. The collating unit as claimed in claim 8, further including—

50 a base positioned generally adjacent to the infeed conveyor, wherein the collating unit conveyor is mounted on the base, and a plurality of sensors mounted on the frame and operable to sense the presence of stored containers.

55 10. The collating unit as claimed in claim 9, wherein the frame includes a longitudinal slot extending a length of the collating unit and formed within the frame such that when the frame is positioned over the infeed and collating unit conveyors, the longitudinal slot is generally positioned over the infeed conveyor.

60 11. The collating unit as claimed in claim 10, wherein when the frame is positioned over the infeed and collating

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unit conveyors, the holding areas formed within the frame are generally positioned over the collating unit conveyor.

12. The collating unit as claimed in claim 11, wherein each holding area includes an open end and a closed end, and the open end of each area is interconnected with the longitudinal slot, such that each holding area is formed in the frame at an angle less than 90° with respect to the longitudinal slot.

13. A collating unit for automatically storing prescription containers dispensed by an automatic dispensing system, the collating unit comprising:

- an infeed conveyor for transporting the containers from the automatic dispensing system to the collating unit;
- a base positioned generally adjacent to the infeed conveyor;
- a collating unit conveyor mounted on the base;
- a frame substantially surrounding and covering the infeed conveyor and the collating unit conveyor;
- a plurality of holding areas formed within the frame for holding the containers;
- a plurality of guide arms mounted on the base between the infeed conveyor and the collating unit conveyor and operable to maneuver the containers from the infeed conveyor into the plurality of holding areas;
- a plurality of sensors positioned on the frame and operable to sense the presence of the containers stored in the collating unit; and
- a control system for controlling operation of the infeed conveyor, the collating unit conveyor, the plurality of guide arms, and the plurality of sensors.

14. The collating unit as claimed in claim 13, wherein the collating unit is configured for use with an existing control center cooperating with the automatic dispensing system.

15. The collating unit as claimed in claim 14, wherein the infeed conveyor is an outfeed conveyor of the automatic dispensing system.

16. The collating unit as claimed in claim 15, wherein the base is positioned in an opening in a counter top of the control center.

17. The collating unit as claimed in claim 16, wherein the frame includes a longitudinal slot extending a length of the

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collating unit and formed within the frame such that when the frame is positioned over the infeed and collating unit conveyors, the longitudinal slot is generally positioned over the infeed conveyor.

18. The collating unit as claimed in claim 17, wherein when the frame is positioned over the infeed and collating unit conveyors, the holding areas formed within the frame are generally positioned over the collating unit conveyor.

19. The collating unit as claimed in claim 18, wherein each holding area includes an open end and a closed end, and the open end of each area is interconnected with the longitudinal slot, such that each holding area is formed in the frame at an angle less than 90° with respect to the longitudinal slot.

20. The collating unit as claimed in claim 19, wherein sensors are positioned at an end of the longitudinal slot, at the closed end of each holding area, and at the open end of each holding area along a length of the longitudinal slot.

21. The collating unit as claimed in claim 20, the control system including—

- a computing device from which the control system may be operated,
- an infeed conveyor controller for controlling operation of the infeed conveyor,
- a collating unit conveyor for controlling operation of the collating unit conveyor,
- a guide arm controller for controlling operation of each guide arm,
- a sensor controller for controlling operation of each sensor,
- a central sensor controller for controlling operation of each sensor controller,
- an input device for inputting identifying information for the containers, such as a patient's name or a script number for each container, into the control system,
- an indicia reader for reading a bar code associated with the container, and at least one display that serves as an operator interface.

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(54) **COLLATING UNIT FOR USE WITH A CONTROL CENTER COOPERATING WITH AN AUTOMATIC PRESCRIPTION OR PHARMACEUTICAL DISPENSING SYSTEM**

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 (58) **Field of Classification Search** None
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References Cited

U.S. PATENT DOCUMENTS

3,642,117 A	2/1972	Burt
3,955,678 A	5/1976	Moyer
4,711,357 A	12/1987	Langenbeck
5,208,762 A	5/1993	Charhut et al.
5,620,102 A	4/1997	Finch, Jr.
5,749,473 A	5/1998	Yamashita et al.
5,771,657 A	6/1998	Lasher et al.
5,963,453 A	10/1999	East

FOREIGN PATENT DOCUMENTS

WO 98/09598 3/1998

OTHER PUBLICATIONS

Case History (as of Jan. 9, 2008) for 2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.* in the U.S. District Court, District of Kansas.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 1—Complaint.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 1—Exhibit; U.S. Patent 6,910,601.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 2—Designation of Place of Trial.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 3—AO Form 120.

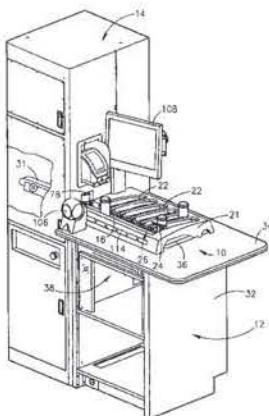
2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 3—Exhibit; U.S. Patent 6,910,601.

(Continued)

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ABSTRACT

A collating unit (10) for use with a control center (12) cooperating with an automatic dispensing system ("ADS") (14) for automatic storage of prescription containers dispensed from the ADS (14). The collating unit (10) broadly comprises an infeed convey or (16) for transporting the prescription containers from the ADS (14) to the collating unit (10); a base (18) housed within the control center (12) and positioned generally adjacent to the infeed conveyor (16); a collating unit conveyor (20) mounted on the base (18); a frame (21) substantially surrounding and covering the infeed conveyor (16) and the base (18); a plurality of holding areas (22) formed within the frame (21); a plurality of guide arms (24) mounted on the base (18) between the infeed conveyor (16) and the collating unit conveyor (20) and operable to maneuver the containers from the infeed conveyor (16) into the plurality of holding areas (22); a plurality of sensors (26) to sense the presence of the containers within the collating unit (10); and a control system (28) for controlling operation of the infeed conveyor (16), the collating unit conveyor (20), the guide arms (24), and the sensors (26).



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OTHER PUBLICATIONS

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 4—Corporate Disclosure Statement.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 5—Entry of Appearance.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 6—Return of Service of Summons Executed.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 7—Answer to Complaint.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 8—Designation of Place of Trial.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 9—Corporate Disclosure Statement.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 10—Order Setting Scheduling Conference.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 11—Motion to Appear Pro Hac Vice Levy.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 11-2—Affidavit in Support Levy.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Docket Text for Document 12—Order on Motion to Appear Pro Hac Vice Levy.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 13—Answer to Counterclaim.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 14—Motion to Continue.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 15—Order on Motion to Continue.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 16—Motion to Appear Pro Hac Vice Shields.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 16-2—Affidavit in Shields.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 17—Motion to Appear Pro Hac Vice Wilkins.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 17-2—Affidavit in Support Wilkins.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 18—Affidavit in Support of Pro Hac Vice Motion Shields.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Docket Text for Document 19—Order on Motion to Appear Pro Hac Vice Shields and Wilkins.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 20—Protective Order.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 21—Scheduling Order.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 22—Certificate of Service.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 23—Motion for Leave.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 23-2—Amended Answer and Counterclaims.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Docket Text for Document 24—Order on Motion for Leave to File.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 25—Answer to Complaint.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 26—Certificate of Service.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 27—Answer to Counterclaim.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 28—Motion to Stay Case.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 29—Memorandum in Support of Motion.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 30—Certificate of Service.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Docket Text for Document 31—Order.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 32—Repsonse to Motion.

2:06-cv-02468-CM-JPO *ScriptPro LLC v Innovation Associates, Inc.*; Document 33—Order on Motion to Stay Case.

US 6,910,601 C1

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**INTER PARTES
 REEXAMINATION CERTIFICATE
 ISSUED UNDER 35 U.S.C. 316**

THE PATENT IS HEREBY AMENDED AS
 INDICATED BELOW.

Matter enclosed in heavy brackets [] appeared in the patent, but has been deleted and is no longer a part of the patent; matter printed in italics indicates additions made to the patent.

AS A RESULT OF REEXAMINATION, IT HAS BEEN DETERMINED THAT:

The patentability of claims 8, 9 and 13-16 is confirmed.

Claims 1, 2 and 4 are determined to be patentable as amended.

Claim 7, dependent on an amended claim, is determined to be patentable.

Claims 5, 6, 10-12 and 17-21 were not reexamined.

1. A collating unit [for automatically storing] *configured to automatically store therein* prescription containers dispensed by an automatic dispensing system, the collating unit comprising:

a storage unit [for storing the] *configured to store in an upright configuration a plurality of prescription containers delivered by an infeed conveyor;*

a plurality of holding areas formed within the storage unit *for holding the plurality of prescription containers in an upright configuration;*

a plurality of guide arms mounted within the storage unit and operable to maneuver the *plurality of prescription containers* from the infeed conveyor into the plurality of holding areas, and

a control system for controlling operation of the infeed conveyor and the plurality of guide arms;

wherein the storage unit includes a frame raised above and substantially surrounding at least a portion of at least one of the infeed conveyor or another conveyor, the plurality of holding areas being formed within the frame for holding the plurality of prescription containers.

2. [The collating unit as claimed in 1.] *A collating unit for automatically storing prescription containers dispensed by an automatic dispensing system, the collating unit comprising:*

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a storage unit for storing the containers delivered by an infeed conveyor;
a plurality of holding areas formed within the storage unit for holding the containers;
a plurality of guide arms mounted within the storage unit and operable to maneuver the containers from the infeed conveyor into the plurality of holding areas; and
a control system for controlling operation of the infeed conveyor and the plurality of guide arms;
wherein the storage unit [including—a base positioned] includes:

a collating unit conveyor generally adjacent to the infeed conveyor; and

[a collating unit conveyor mounted on the base; and]
*a frame substantially surrounding and covering [the infeed conveyor and] *at least a portion of the collating unit conveyor, the plurality of holding areas being formed within the frame for holding the containers.**

4. [The collating unit as claimed in claim 3.] *A collating unit for automatically storing prescription containers dispensed by an automatic dispensing system, the collating unit comprising:*

a storage unit for storing the containers delivered by an infeed conveyor;

a plurality of holding areas formed within the storage unit for holding the containers;

a plurality of guide arms mounted with the storage unit and operable to maneuver the containers from the infeed conveyor into the plurality of holding areas; and
a control system for controlling operation of the infeed conveyor and the plurality of guide arms;

wherein the storage unit includes:

a base positioned generally adjacent to the infeed conveyor;

a collating unit conveyor mounted on the base; and,
a frame substantially surrounding and covering the infeed conveyor and the collating unit conveyor;

wherein the infeed conveyor is an outfeed conveyor of the automatic dispensing system; and

wherein the frame includes is longitudinal slot extending a length of the collating unit and formed within the frame such that when the frame is positioned over the infeed and collating unit conveyors, the longitudinal slot is generally positioned over the infeed conveyor.

* * * * *

**United States Court of Appeals
for the Federal Circuit**
SCRIPTPRO, LLC v INNOVATION ASSOCIATES, 2015-1565

CERTIFICATE OF SERVICE

I, Elissa Matias, being duly sworn according to law and being over the age of 18, upon my oath depose and say that:

Counsel Press was retained by LATHROP & GAGE LLP, attorneys for Appellants to print this document. I am an employee of Counsel Press.

On **July 16, 2015** counsel for Appellants has authorized me to electronically file the foregoing **Brief for Plaintiffs-Appellants** with the Clerk of Court using the CM/ECF System, which will serve via e-mail notice of such filing to any of the following counsel registered as CM/ECF users:

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Additionally, paper copies will also be mailed to the above counsel when the copies are sent to the Court.

Upon acceptance by the Court of the e-filed document, six paper copies will be filed with the Court within the time provided in the Court's rules.

July 16, 2015

/s/ Elissa Matias
Counsel Press

**CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME
LIMITATION, TYPEFACE REQUIREMENTS AND TYPE STYLE
REQUIREMENTS**

1. This brief complies with the type-volume limitation of Federal Rule of Appellate Procedure 32(a)(7)(B).

The brief contains 8,867 words, excluding the parts of the brief exempted by Federal Rule of Appellate Procedure 32(a)(7)(B)(iii), or

The brief uses a monospaced typeface and contains _____ lines of text, excluding the parts of the brief exempted by Federal Rule of Appellate Procedure 32(a)(7)(B)(iii).

2. This brief complies with the typeface requirements of Federal Rule of Appellate Procedure 32(a)(5) and the type style requirements of Federal Rule of Appellate Procedure 32(a)(6).

The brief has been prepared in a proportionally spaced typeface using MS Word 2013 in a 14 point Times New Roman font or

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Dated: July 16, 2015

LATHROP & GAGE LLP

/s/ R. Cameron Garrison

R. Cameron Garrison

Counsel for Appellants